

MANEUVER WARFARE AT SEA:  
A HISTORICAL REVIEW

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE

by

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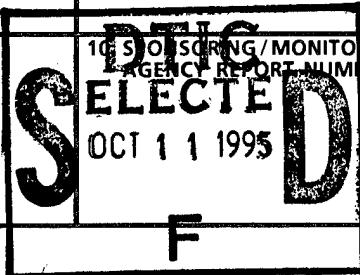
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## ABSTRACT

MANEUVER WARFARE AT SEA: A HISTORICAL REVIEW by LCDR Patrick A. Piercey, USN.

This study investigates the historical basis of maneuver warfare at sea to answer the question: Does the adoption of maneuver warfare by the U.S. Navy improve its ability to carry out its roles and functions in support of the national military strategy? The fundamental maneuver warfare concept examined is that maneuver warfare seeks the psychological defeat of the enemy by destroying his cohesion and will to resist through disruption of his decision cycle by presenting cascading and unexpected threatening situations by assaulting his center of gravity at a tempo at which he can not respond.

Two historical case studies are examined at the operational level: the Trafalgar Campaign of 1805 and the Falklands/Malvinas War of 1982. Analysis of the both reveals evidence of the application of maneuver warfare concepts.

The study concludes that maneuver warfare has a foundation in naval history. Maneuver warfare on both land and sea seek the psychological defeat of the enemy, primarily that of the commander. As such, maneuver warfare is a viable doctrine for the U.S. Navy.

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## CHAPTER 1

### INTRODUCTION

#### General

The last fifteen years have been an exciting period for the United States and her allies. During this period of time, the Cold War was concluded victoriously for the western world. Within the United States Naval Services, the Navy experienced a resurgence of strategic thinking culminating in the unprecedented Maritime Strategy. The Marine Corps underwent a doctrinal revolution adopting the doctrine of maneuver warfare. More recently, both services combined efforts to develop a new strategy reflecting the post-Cold War environment. This strategy was articulated in " . . . From the Sea" and recently refined in "Forward . . . From the Sea." Additionally, in 1993 the Navy established the Naval Doctrine Command to develop doctrine in support of the new strategy. The Navy's capstone doctrinal publication, Naval Doctrine Publication (NDP) 1--Naval Warfare, was the Command's first written product. Both NDP-1 and the Marine Corps capstone publication, Marine Corps Fleet Marine Fighting Manual (FMFM) 1--Warfighting, are similar in many respects. One significant similarity is the adoption of maneuver warfare as a defining tenet.

What exactly is maneuver warfare? At the most fundamental level, maneuver warfare seeks the psychological defeat of the enemy by

destroying his cohesion and will to resist. NDP 1 discusses four basic concepts: center of gravity, critical vulnerability, focus of effort, and main effort. With a thorough understanding of these concepts, a commander will operate at a tempo which will, in the words of William Lind, "disrupt the enemy's cohesion by creating unexpected and dangerous situations more rapidly than the enemy can deal with them."<sup>1</sup> These concepts are applicable at all the levels of warfare: strategic, operational, and tactical.

The Navy's embrace of a new strategy and doctrine is intended to prepare the service for the challenges of the post-Cold War era. With the concepts of maneuver warfare primarily founded upon the study of land warfare, is the Navy's acceptance of maneuver warfare as applicable to the maritime environment a leap of faith or of reason? This leads to the primary question: Does the doctrine of maneuver warfare improve the ability of the Navy to carry out its roles and functions in support of the national military strategy? This question alludes to several secondary questions. First, does maneuver warfare have a sound and rational basis to be considered part of the art of war? This question will be examined in chapter 2 by reviewing maneuver warfare literature. Second, does maneuver warfare have a basis in naval history? This question will be addressed in two case studies: the Trafalgar Campaign of 1805 (chapter 3) and the Falklands/Malvinas War of 1982 (chapter 4). Third, does maneuver warfare have applicability in the future?

Before addressing these questions, several critical terms will be defined. These terms are the three levels of warfare--strategy,

operational art, and tactics--and maneuver. Of the levels of warfare, the definitions of strategy and tactics have existed in modern military thought in more or less the same form. In contrast, the definition of operational art has not been as consistent, having appeared in various forms and guises, such as grand tactics and campaigns. With the definition of operational art having first appeared in Army Field Manual (FM) 100-5, Operations, in 1982, only recently have the Armed Forces embraced the operational art as a level of war. The current FM 100-5 definitions of strategy, operational art, and tactics are:

Strategy - the art and science of employing the armed forces and other elements of national power during peace, conflict and war to secure national security objectives.<sup>2</sup>

Operational Art - the employment of military forces to attain strategic goals through the design, organization, integration, and execution of battles and engagements into campaigns and major operations. In war, operational art determines when, where, and for what purpose major forces will fight over time.<sup>3</sup>

Tactics - the art and science of employing available means to win battles and engagements.<sup>4</sup>

With different definitions of maneuver appearing in the literature, maneuver is not as well defined. For example, in The Art of Maneuver, Robert L. Leonard defines maneuver "to mean, quite simply, movement."<sup>5</sup> FM 100-5 defines maneuver as "the movement of forces in relation to the enemy to gain positional advantage."<sup>6</sup> Both Leonard's and the Army's definitions are spatially limited. Lind expands the definition by introducing a time dimension so that maneuver refers not only to movement that gains a positional advantage, but also to movement that happens faster than the enemy's.<sup>7</sup> To move faster means you must act faster. Lind writes, "The theoretical understanding of war as a

competition in time even more than in position is a recent development.<sup>8</sup> Lind continues by defining maneuver to mean "moving and acting consistently more rapidly than the opponent."<sup>9</sup> This definition of maneuver lacks a focus for the movement and action could be either coherent or random. Therefore, the following definition of maneuver will be used: coherently moving and acting consistently more rapidly than the enemy towards a common end.

#### A Discussion of Maritime Strategy

Before the advent of air power, the debate about military strategy could be generally categorized by two schools, the "maritime" school and the "continental" school. This historical debate was fought amongst the ruling circles of both continental and maritime states, from Sparta and Athens to Britain and Germany. As has been notably articulated by Paul Kennedy in The Rise and Fall of Great Powers and The Rise and Fall of British Naval Mastery, a state's capacity to wage war is directly related to its economic and financial resources. With no state having unlimited resources, the state must decide how to best prioritize its resources. The "maritime" school sought to prioritize naval forces. Naval forces would protect overseas trade to maintain a strong economy, deny the enemy's overseas trade, carry out peripheral raids against the enemy, and ensure isolation from threatening "continental" states. The "continental" school sought to prioritize land forces with their corresponding advantages. The ""continental" school further argued that to adopt a purely "maritime" strategy would be too isolationist. For example, in the case of Britain, Kennedy

writes, "a continental military commitment was necessary, since their country's [Britain] security was inextricably bound up with the fate of the European balance of power, and that an isolationist policy would endanger Britain too in the long run."<sup>10</sup>

With the publication of Alfred T. Mahan's Influence of Sea Power Upon History 1660-1783 in 1890, the "maritime" school had found its "evangelist of sea power." To some Mahan was an evangelist, but too others, including Kennedy, he was a historian. Kennedy observed that "no scholar since his [Mahan] day could write about the rise of the British Empire without acknowledgment to the roles of sea power," but, "what was true of the past was not necessarily so of the future."<sup>11</sup> What Kennedy was leading to was the perceptive prophecy of the geopolitician Halford Mackinder who suggested that the Columbian epoch--that period of four centuries of overseas exploration and conquest by the European powers--was coming to an end, and with little left to conquer, a new epoch would begin where efficiency and internal development would replace expansionism and give rise to the new great powers, those large nations with vast resources.<sup>12</sup>

MacKinder's prescient prophecy would influence the "maritime-continent" debate. Kennedy further wrote that "Mackinder had pointed out that the coming of industrialization and of the railway to such continent-wide states as Russia and the United States was beginning to permit land power to re-assert that dominance over sea power which it had lost when the sailing-ship had revolutionized world politics some three centuries earlier."<sup>13</sup> The age of sea power was waning in relation

to land power.<sup>14</sup> Within this framework of the "maritime-continental" debate, insight is gained in the development of the United States Navy's Maritime Strategy of 1982.

The Maritime Strategy stands out as an unprecedented pronouncement of the Department of the Navy's contribution to the National Military Strategy. The document was unprecedented in that it was produced solely within the Department and that it was the first maritime strategy articulated since World War II. Although this implies that the Navy did not have a maritime strategy previously, the Navy in fact did, but like its doctrine, the maritime strategy was unwritten and based upon long-held ideas which lay behind NATO and the traditional views of Alfred T. Mahan and Sir Julian Corbett.<sup>15</sup> The Maritime Strategy arose from a resurgence of strategic thinking within the Navy.

With the appointment of Admiral Thomas B. Hayward as Chief of Naval Operations (CNO) in 1978, this resurgence began. The previous CNO Admiral James L. Holloway set the precedent that the Navy should think in terms of forward, offensive operations and seek superiority at sea against the Soviets. Furthermore, the advances in nuclear weapons technology and methods of their use posed new problems. With this new strategic mindset, Admiral Hayward sought to reverse the process of the budget driving strategic concepts.<sup>16</sup> Institutional changes were made to establish and maintain the dominance of strategy over weapons. These changes included the formation of the Directorate of Naval Warfare, the Long Range Planning Group, and the Chief of Naval Operation's Strategic Studies Group.

The Directorate of Naval Warfare coordinated the work of the platform barons (the Deputy CNO's for Air, Submarine and Surface). The Long Range Planning group assessed future resource limitations and analyzed alternative strategies. The Strategic Studies Group, in residence at the Naval War College and reporting directly to the CNO, acted as a focal point for strategic thinking.<sup>17</sup> Of these three changes, the Strategic Studies Group played the pivotal role in the development of the Maritime Strategy, for they confirmed the conceptual feasibility of forward, offensive naval operations to directly threaten Soviet strategic capabilities in her own waters.

A concurrent step in the development of the Maritime Strategy was a review of the program appraisal process initiated by the Vice CNO Admiral Small. Since the yardstick for program comparison would be the program's relative value in support of a strategy, the first step of the review would be a determination of what the strategy was. Therefore, from this review sprang the first version of the Maritime Strategy published classified in 1984 and unclassified in early 1986.<sup>18</sup> Key elements of the Maritime Strategy appeared in President Reagan's National Security Strategy, part of which stated,

Maritime superiority enables us to capitalize on Soviet geographical vulnerabilities and to pose a global threat to the Soviet's interests. It plays a key role in plans for the defense of NATO allies on the European flanks. It also permits the United States to tie down Soviet naval forces in a defensive posture protecting Soviet ballistic missile submarines and the seaward approaches to the Soviet homeland, thereby to minimize the wartime threat to the reinforcement and resupply of Europe by the sea.<sup>19</sup>

That the Maritime Strategy was focused on the Soviet Union cannot be denied, but this was not considered a limitation. A naval

force structure designed to carry out what James George describes in "Maritime Mission or Strategy" as the strategy's three phases-- deterrence, seizing the initiative, and carrying the fight to the enemy<sup>20</sup>--would be able to execute traditional secondary missions of navies, such as forward presence and dealing with regional contingencies. Nonetheless, the Maritime Strategy did foster significant debate.

One aspect of the debate relevant to the previous "maritime-continental" discussion appeared in Lind's article, "Maritime Strategy--1988: A Bad Strategy." He argued that it did not meet the historical standards as a true maritime strategy:

Corbett in particular stressed that while a maritime strategy may involve some commitments on the European mainland, those commitments must remain limited. The maritime nation, though it may be injured by a defeat on the continent, must always be able to withdraw and continue to resist. . . . A nation that follows a maritime strategy never commits its continued existence in a battle on or for the continent.<sup>21</sup>

The last sentence is the most important. In his opinion, the Strategy's hazardous forward offensive in support of the land war exceeded Corbett's limited commitment placing the United States continued existence in the hands of the land. Eric Groves tends to agree with Lind when in his introduction to Corbett's Some Principles of Maritime Strategy he writes, "Corbett would, one feels, have had little patience with some U.S. Navy expositions in the 1980s of the need, on principle, to 'go in harms' way."<sup>22</sup>

What is interesting about this discussion is that Lind and Corbett were both right and wrong. Although Lind's argument has validity, the Strategy remained a sound contribution to the encompassing

European war strategy. Mackubin Owens writes, "even the 'Maritime Strategy' was merely the naval component of a grand strategy designed to deter the Soviet Union and defeat it as early as possible by conventional means if deterrence failed."<sup>23</sup> The grand strategy that Owens refers to is the "continental" strategy that the United States was committed to for "in the formulation of Sir Michael Howard, the United States had to make the 'continental commitment' during the Cold War in order to prevent Soviet hegemony over Europe."<sup>24</sup> Therefore, although Lind was correct in arguing that the Strategy did not meet historical standards, he was wrong in arguing that it was a "bad" strategy for the Cold War.

From the downfall of the Soviet Union rose a new strategic environment of a multipolar and uncertain nature. The environment is multipolar in that the bipolar world of the Cold War disintegrated into, arguably, a single superpower, the United States, and a host of growing regional powers no longer constrained by the forces of the old bipolar world. The environment is uncertain in that nationalistic, ethnic, and religious forces restrained by the Cold War have been unleashed to work in uncertain ways.

In this new environment, the *raison d'être* for the Strategy no longer existed, and Lind's argument assumed greater validity. With the possibility of Russian hegemony of Europe becoming less likely, should the United States adopt a more traditional maritime strategy? Has the world reached the end of Mackinder's prophecy? Has the pendulum stopped its swing to the "continental" end and started swinging back to the "maritime" end?

Some have argued that the conclusion of the Cold War constituted an "American Trafalgar"<sup>25</sup> marking a period of the United States' uncontested dominance of the seas. Although this "Trafalgar" did not culminate in a great battle, the results are similar in that the United States Navy no longer faces a serious conventional threat. Could this "American Trafalgar" be the start of a new era of American naval mastery paralleling that of the British in the nineteenth century? If so, as did the Royal Navy of the nineteenth century, the United States Navy will be primarily employed in secondary missions with the traditional primary mission of establishing command of the seas already presumed. This manner of employment is evident in ". . . From the Sea," the successor to the Maritime Strategy.

The relegation of establishing command of the seas to a secondary consideration has been argued by some as "revolutionary"<sup>26</sup> for this seems to contradict the fundamental principles of Mahan and Corbett. A closer review of ". . . From the Sea" reveals a more evolutionary than revolutionary change. What appears as the relegation of command of the sea to secondary importance is actually the assumption that command of the sea has been achieved. Greater emphasis is placed on secondary missions. A review of how ". . . From the Sea" evolved from the Maritime Strategy explains this better.

Lieutenant Colonel Alan Helms' article ". . . From the Sea: Steady As She Goes" provides an excellent summary of the evolution of ". . . From the Sea." The impetus towards a new unified naval strategy originated from a July 1990 meeting of the CNO Admiral Frank Kelso, the Commandant of the Marine Corps (CMC) General Al Gray, and the Secretary

of the Navy (SECNAV) Lawrence Garrett III. They realized that the new strategic environment made the separate revisions to the Maritime Strategy and the Amphibious Strategy, then in progress, obsolete. Future strategic direction should originate from a joint Navy and Marine Corps document. In the following year, neither side reached an agreement on what the new direction should be. What had been hoped to be the new direction was published in April 1991 as a three-byline (SECNAV, CNO, CMC as authors) statement, "The Way Ahead." Having several fundamental flaws, this document was stillborn. Immediate efforts began to correct the flaws. In September of 1991, the Naval Force Capabilities Planning Effort was tasked to determine what capabilities naval forces should possess and what new naval strategies should be considered. This effort, undertaken jointly by the Navy and the Marine Corps, developed the recommendations, tested by wargames in September 1992, that formed the foundation of ". . . From the Sea."<sup>27</sup>

Several concepts that appear in ". . . From the Sea" are significant. First, as previously discussed, the concept that command of the sea is assumed appears in the document--"With the demise of the Soviet Union, the free nations of the world claim preeminent control of the seas and ensure freedom of commercial maritime passage."<sup>28</sup> Second, the naval expeditionary force concept assumes dominance:

Naval Expeditionary Forces--Shaped for Joint Operations--Operating Forward from the Sea--Tailored for National Needs. This strategic direction, derived from the National Security Strategy, represents a fundamental shift away from open-ocean warfighting on the sea toward joint operations conducted from the sea.<sup>29</sup>

Third, the concept of the Navy-Marine Corps team is more closely interwoven to support the naval expeditionary force concept. Fourth,

the CNO's staff was reorganized to reduce the influence of the platform barons. Fifth, and maybe of lasting importance, the Naval Doctrine Command was established. And finally, of singular importance to this thesis, the Naval Forces adopted maneuver warfare as a defining tenet:

The shift in strategic landscape means that Naval Forces will concentrate on littoral warfare and maneuver from the sea. Maneuver from the sea, the tactical equivalent of maneuver warfare on land, provides a potent warfighting tool to the Joint Task Force Commander--a tool that is literally the key to success in many likely contingency scenarios.<sup>30</sup>

The most recent revision of the Navy's maritime strategy appeared in December 1994, in the three-byline statement, "Forward . . . From the Sea." This revision of " . . . From the Sea" is not a marked departure, for it "amplifies the scope of our [Naval Services] strategic concept while confirming the course and speed for the naval service as defined in the original document."<sup>31</sup> The most significant change is the tempering of the preeminence of the naval expeditionary concept--"As we continue to improve our readiness to project power in the littorals, we need to proceed cautiously so as not to jeopardize our readiness for the full spectrum of missions and functions for which we are responsible."<sup>32</sup> This full spectrum includes the missions and functions necessary to execute the five fundamental roles in support of the National Security Strategy: "projection of power from sea to land, *sea control and maritime supremacy* [my italics], strategic deterrence, strategic sealift, and forward naval presence."<sup>33</sup> "Forward . . . From the Sea" simply tries to restore some balance with traditional maritime missions.

To conclude, the evolution of the Navy's maritime strategy, first articulated in the Maritime Strategy and recently in "Forward . .

. From the Sea," was reviewed to establish the strategic context in which to consider maneuver warfare. Within the framework of the "maritime-continental" debate, the Navy's Maritime Strategy operated as the naval component of a grand "continental" strategy designed to meet the threat of Soviet hegemony over Europe. This grand strategy was consistent with Mackinder's prophecy of the rise of continent spanning land powers and the fall of maritime powers. With a multipolar and uncertain security environment rising from the downfall of the Soviet Union, a new maritime era may lay before us. "Forward . . . From the Sea" attempts to led the Naval Services into this new era and adopts maneuver warfare as a new tool as the key to success.

## CHAPTER 2

### MANEUVER WARFARE

In February 1991, the United States and her coalition allies defeated Iraq and succeeded in liberating Kuwait. The success of the Gulf War has been attributed to its foundation in maneuver warfare and the operational art. Gary Wilson writes in "The Gulf War, Maneuver Warfare, and the Operational Art":

The success of this doctrine was spelled out in General H. Norman Schwarzkopf's brief of "How the War Was Won." It is all there: the refusal to join ground combat prematurely; deception operations; multiple simultaneous thrusts; collapsing a flank by deep sweeping forces; firepower in a maneuver context, creating ambiguity; uncertainty, hesitation, and psychological operations shattering enemy unit cohesion.<sup>1</sup>

Furthermore, he writes that the "coalition outmaneuvered Iraq by creating a high tempo of operations and posing dilemmas that occurred unexpectedly and faster than the Iraqis could keep pace with."<sup>2</sup> He quotes Major General James Myatt, the commanding general of 1st Marine Division, who said, "Our focus was not on destroying everything. Our focus was on the Iraqi mind and getting in behind them."<sup>3</sup>

As mentioned in chapter 1, at the most fundamental level, maneuver warfare seeks the psychological defeat of the enemy by destroying his cohesion and will to resist. Before discussing this concept and the associated debate in greater detail, the origination of the modern concepts of maneuver warfare will be reviewed to establish the necessary background. The modern concepts of maneuver warfare

emerged from the military reform debate of the early 1980s. This debate was spearheaded by the Congressional Military Reform Caucus, a bicameral, bipartisan caucus established in the summer of 1981.<sup>4</sup> In addition to members of this caucus, many noted professionals, including members of the Armed Services, recognized the necessity for reform. With real and apparent military shortcomings, such as the Vietnam War, the Mayaguez incident, the aborted Desert One mission, the car-bombing of the Marine Barracks in Beirut, and the invasion of Grenada, conditions were ripe for debate. Additionally, with the growth of the defense budget, questions on efficient resource allocation were raised. Members of the military reform movement included politicians, such as Senator Gary Hart and Representative William Whitehurst, serving military officers, and of particular importance to the development of maneuver warfare, William Lind and Colonel John Boyd, USAF, retired.

Before the influence of Lind and Boyd shaped concepts of maneuver warfare, the rough form of maneuver warfare was first molded by the strength of the public's expectations of war--quick wars with no unnecessary loss of life. To illustrate, the tragic loss of life in Vietnam coupled with no visible gains conditioned public opinion against commitments that unduly risked lives for marginal results. This conditioning was further reinforced by the unparalleled low casualties in the Gulf War. The public's expectation for a quick war has similar parallels in the Vietnam and Gulf Wars. As in the case of the Gulf War and the recent Haitian operation, the question most frequently asked of our leaders is "When are the boys coming back?" Proponents have

persuasively argued that maneuver warfare meets these public expectations, hence improving the acceptance of maneuver warfare.

A long-time proponent of maneuver warfare, William Lind may be considered its most influential advocate. Hired in 1973 by Senator Robert Taft, Jr., as a legislative assistant for foreign affairs in 1973, he ultimately became Taft's adviser on defense issues. In 1976, he assisted in drafting the white paper, "A Modern Military Strategy for the United States." In 1977, he joined the staff of Senator Gary Hart.<sup>5</sup> Together they wrote the book America Can Win which contained their recommendations for military reform. This book includes an excellent discussion on what Lind has defined as the two basic styles of warfare, firepower/attrition and maneuver. Both authors argued that the maneuver style is superior to the firepower/attrition style and urge the adoption of the former as doctrine.

Lind's influence has not been solely limited to America Can Win and is most evident in his articles in the Marine Corps Gazette and articles written by others in the Gazette and other professional periodicals. In 1980, he wrote a good article on maneuver warfare, "Defining Maneuver Warfare for the Marine Corps." In this article, he developed several themes that consistently appear in maneuver warfare literature. These themes are: that two styles of warfare exist, maneuver and firepower/attrition; that maneuver warfare has a historical basis as old as Alexander the Great, but was first institutionalized by the Germans in the late nineteenth century; that maneuver warfare emphasizes the psychological element of warfare whereas attrition emphasizes the physical element; that maneuver warfare theory is based

upon the "Boyd Theory"--to be discussed shortly; that maneuver means "moving and acting consistently more rapidly than the opponent;" that maneuver warfare focuses on the operational level rather than the tactical; and that maneuver warfare seeks the destruction of the enemy's vital cohesion.<sup>6</sup> The consistent appearance of these themes in maneuver warfare literature and in both the Marine Corps and the Navy's capstone doctrinal publications, FMFM 1 and NDP 1, are indicative of his influence.

Through the process of historical analysis, maneuver warfare advocates claim that the two distinct styles of warfare emerge, and their objectives differ. The firepower/attrition objective is:

simply to pour firepower on the enemy--artillery shells, bombs from aircraft, bullets, etc.--to kill his troops and destroy his equipment. To win, you need to kill enough of his troops and blow up so much of his equipment that he can no longer fight.<sup>7</sup>

Frequently cited examples of attrition warfare at the tactical level are the battles of World War I such as the Battle of the Somme. In contrast, the maneuver objective is:

not to kill enemy soldiers, but to shatter the ability of whole enemy units . . . to fight in an organized, effective way, and to panic and paralyze enemy commanders. The main means is not firepower, but maneuver. In the term "maneuver warfare," the word maneuver means Boyd Cycling the enemy: presenting him with surprising and dangerous situations faster than he can react to them, until he comes apart.<sup>8</sup>

Common examples of maneuver warfare at the operational level are the campaigns of the Wehrmacht during World War II, most notably the campaign that overwhelmed France in 1940. Lind wrote that "The Germans outmaneuvered the Allies by attacking where they were not expected," and continued, "they followed up their breakthrough with stunning speed . . . and the realization that they [The French High Command] could not

move fast enough brought the French to panic and despair, and France collapsed."<sup>9</sup>

The mounting despair of the French attests that the Wehrmacht successfully outmaneuvered the French within their decision cycle. This concept of defeating an enemy by maneuvering within his decision cycle has been referred to as the "Boyd Theory" developed by John Boyd after analyzing why American pilots outperformed Chinese and North Korean pilots during the Korean War. Boyd presented his theory in his briefing "Patterns of Conflict."

He described conflict as a time-competitive process of Observation-Orientation-Decision-Action (OODA or Boyd) cycles.<sup>10</sup> The cycle begins with each party to a conflict observing. They then orient themselves to develop a mental picture of the situation. From this orientation, they make a decision. They act on this decision, and repeat the cycle. Boyd theorized that if your OODA cycle were shorter than the enemy's, by the time the enemy acts, you have already acted again rendering his action irrelevant. As the cycles continue, the enemy acts slower and slower, till eventually, he becomes paralyzed. Although Boyd deduced his theory from analysis of events at the tactical level, the theory is sufficiently broad to encompass the operational and strategic levels of war. This theory is probably the most fundamental in understanding maneuver warfare.

Maneuver warfare has been criticized from all quarters. One criticism is that maneuver warfare is an oversimplification. Andrew Walker argues in "An Alternative to Maneuver Warfare" that the assumption that:

combat is composed of only two basic components [firepower and maneuver] and therefore is defined by two styles of warfare . . . is a vast oversimplification of a complex concept.<sup>11</sup>

He supports his argument on the premise that warfighting is based upon the interaction of six components of combat--intelligence, firepower, maneuver, protection, command and control, and logistics<sup>12</sup>--instead of two, firepower and maneuver. He concludes, "Although maneuver warfare is valid under certain circumstances, the nature of war and the realities of the modern battlefield call for a much more flexible doctrine of warfare."<sup>13</sup>

Another criticism is that against well-trained forces cohesion will not be broken by maneuver alone. Walker noted this criticism writing that although a poorly led army may be destroyed by maneuver, a well-trained or motivated army may not be. Consequently, the army's means to resist must be destroyed.<sup>14</sup> Sean Coughlin echoes this sentiment. He offers the historical example of the Wehrmacht's Operation Barbarossa. He argues that although the Red Army's cohesion had been broken, they continued to fight although isolated, disorganized, poorly provisioned and lacking centralized command.<sup>15</sup> General DePuy provides a different example. He submits the case of Rommel's routing of the British Eighth Army. Neither Rommel's enveloping maneuver nor the presence of the entire Panzer Army in the British rear resulted in the collapse of the British. Only when the Germans conducted a well-coordinated attack did the British defense collapse.<sup>16</sup>

Other critics have posed the opposite question, "What happens if the enemy doesn't have cohesion or a decision-making cycle worth disrupting."<sup>17</sup> Gary Anderson asks this question in "When Maneuver

Fails." He provides two examples, the Soviets in Afghanistan and the Israelis in southern Lebanon.<sup>18</sup> He considered these examples as typical low intensity conflicts of the late twentieth century. Another example is the Vietnam War which illustrates the influence of a severely constrained military instrument of power on an enemy lacking cohesion or an assailable decision cycle. The political constraints and limited rules of engagement characteristic of low intensity conflicts may limit the effectiveness of maneuver warfare.

Additional criticisms have included: that the Boyd Theory is too narrow;<sup>19</sup> that maneuver warfare is based upon "shoddy historical scholarship";<sup>20</sup> and that attrition warfare may be a necessity.<sup>21</sup>

These criticisms have not gone unrefuted. Several rebuttals have been written: Lind responded in "Misconception on Maneuver Warfare"; Richard Hooker in "The Mythology Surrounding Maneuver Warfare" and Maneuver Warfare: An Anthology. What is important from the debate, however, is that maneuver warfare does have a sound and rational basis to be considered part of the art of war. The criticisms mentioned are noteworthy because they emphasize that a proper balance must be found between maneuver and attrition warfare. The commander must assess his situation, and under the circumstances, select or combine the elements of either style as necessary, hence the art. Colonel T. Dupuy sums up nicely writing:

Army doctrine never has advocated, and I'm sure never will advocate, attrition at the expense of maneuver. Rather, the doctrine is consistent with the record of great generals in favoring a judicious combination of both<sup>22</sup> according to circumstances.

The judicious combination of both maneuver and attrition warfare styles may have its greatest implication in the conduct of naval warfare. In "Preparing for Maneuver Warfare," Lind writes:

Traditionally, American armies have tried to attain their strategic goals by accumulating tactical victories. They have given battle whenever and wherever it has been offered wearing their enemy down engagement after engagement. This is attrition warfare on the operational level. Even if each battle is fought according to maneuver principles, it is inappropriate for the smaller force,<sup>23</sup> because even the best-fought battle brings some casualties."

Consider the reverse of what Lind has said. What if we fight the enemy by giving battle at the place and time of our choosing, but fight the battle according to attrition principles? This would be fighting maneuver warfare at the operational level and attrition warfare at the tactical. Colonel Wallace Franz alludes to this supposition in his article "Grand Tactics." He writes that "what appears to be 'attrition' at the tactical level may be the leading edge of maneuver at the operational level."<sup>24</sup>

One noted analyst, Captain Wayne Hughes, has written that at the tactical level the nature of land warfare differs from sea warfare. These differences include: no corresponding tactical advantage for the defense exists; a small net advantage of naval forces has often been decisive; there are no terrain considerations; and that all forces are committed, none held in reserve.<sup>25</sup> Furthermore, he continues in saying that naval tactics has four theoretical underpinnings: naval tactics are attrition-centered focusing on the successful delivery of firepower; scouting is crucial; command and control transform scouting and firepower into an offensive force; and naval combat is a force-on-force process involving the simultaneous attrition of both sides in which to

achieve victory one must attack effectively first.<sup>26</sup> The struggle for the first salvo in a simple single-ship on single-ship engagement exemplifies these concepts. Captain Hughes underlying theme is the attrition nature of naval warfare at the tactical level.

Although the argument for maneuver warfare may appear somewhat tempered, the case for the Navy's adoption of maneuver warfare remains strong nonetheless. Granted that naval warfare at the tactical level appears attrition-centered, maneuver warfare has obvious naval application at the operational and strategic levels. The case remains strong even more so because to practice maneuver warfare requires a change in mindset.

Maneuver warfare focuses on the psychological element and requires significant mental agility and capability. A commander's thorough comprehension of maneuver warfare is essential in its successful execution at the operational level or higher. With today's new security environment and tightly knit Navy-Marine Corps team, execution of maneuver warfare with naval expeditionary forces, what has been coined "Operational Maneuver From the Sea," becomes even more significant because naval and land warfare are seamlessly merged.

Once again, at the most fundamental level, maneuver warfare seeks the psychological defeat of the enemy by destroying his cohesion and will to resist. Destruction of the enemy's cohesion and will to resist is achieved by disruption of his decision cycle through the presentation of cascading unexpected and threatening situations. Exactly how is the decision cycle disrupted, and how are cascading unexpected and threatening situations presented? Maneuver warfare

literature suggests a multitude of means: mission tactics, commander's intent, center of gravity, surfaces and gaps, focus of effort, main effort, critical vulnerability, decisive points, weaknesses, "Schwerpunkt," "Auftragstaktik," indirect approach, etc. These various means can be distilled into two elements, center of gravity and tempo. By assailing the enemy's center of gravity at a tempo at which he can not respond, the unexpected and threatening situations avalanche until he paralyzed by their weight.

FM 100-5 defines the center of gravity (COG) as "that characteristic, capability, or location from which enemy and friendly forces derive their freedom of action, physical strength, or will to fight."<sup>27</sup> Clausewitz referred to the center of gravity as the "hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed."<sup>28</sup> A tenet of maneuver warfare is to direct all available forces--the focus of effort--against a critical vulnerability--a weakness leading to the center of gravity. The challenge is determining an assailable center of gravity and locating its critical vulnerability.

Colonels W. Mendel and L. Tooke offer an effective method in "Operational Logic: Selecting the Center of Gravity." Their methodology incorporates the following: centers of gravity are derivatives of the aims or objectives; the center of gravity is valid if imposing my will on the center of gravity creates the desired effect; and the center of gravity is feasible if I have the ability to impose my will on it. If the selected center of gravity does not pass the validity test, a different center of gravity must be found. If the

selected center of gravity does not pass the feasibility test, the strategic aims or objectives must be revised.<sup>29</sup> Once the center of gravity has been determined and a critical vulnerability found, the center of gravity must be assailed at a tempo at which the enemy can not respond.

FM 100-5 defines tempo as

the rate of military action; controlling or altering that rate is a necessary means to initiative; all military operations alternate between action and pauses as opposing forces battle one another and fight friction to mount and execute operations at the time and place of their choosing.<sup>30</sup>

Mission tactics and commander's intent are means of increasing tempo. The proponents of maneuver warfare have argued that to maneuver faster than the enemy requires decision making at the lowest level, i.e., decentralized execution. Mission tactics, the method in which a commander is assigned a mission but not told how to do it, is one means of achieving this decentralization. Using mission tactics, the subordinate commander accomplishes his mission within the commander's intent. Commander's intent provides a mental picture of how the commander envisions the situation, and how he expects it to end. Execution of mission tactics guided by commander's intent mentally synchronize friendly actions to operate at a high tempo at all levels to achieve the desired effect on the enemy.

In summary, maneuver warfare has a sound and rational basis, but a balance must exist between the two styles, maneuver and attrition. By nature, naval warfare at the tactical level is attrition oriented, but maneuver warfare has important application at the operational level. The fundamental concept of maneuver warfare is the psychological defeat

of the enemy by destroying the enemy's cohesion and will to resist. Destruction of the enemy's cohesion and will to resist is achieved by disruption of his decision cycle through the presentation of cascading unexpected and threatening situations by assailing the enemy's center of gravity at a tempo at which he can not respond.

Having traced the development of maneuver warfare to its current state and having defined its fundamental concept has provided the necessary background to now proceed with the first historical case study, the Trafalgar Campaign.

CHAPTER 3  
THE TRAFALGAR CAMPAIGN

Introduction

On 14 October 1805, the Battle of Trafalgar was fought off Cadiz between the British Fleet, commanded by Admiral Horatio Nelson, and the French and Spanish Combined Fleet, commanded by Admiral Pierre Villeneuve. In the words of the distinguished British naval historian and strategist, Sir Julian Corbett, the Battle of Trafalgar "brought to a triumphant conclusion one of the most masterly and complex sea campaigns in history."<sup>1</sup> With the decisive defeat of the Combined Fleet and Nelson's death at his pinnacle of glory, the battle has secured its place in history as the greatest battle of the Age of Sail.

With such an immortalized conclusion, the Trafalgar Campaign presents several advantages for the historical study of maneuver warfare. First, as the most celebrated battle of the Age of Sail, a wealth of information is readily available. Two noteworthy works form the primary sources of this chapter. Corbett, described as "Britain's greatest maritime strategist,"<sup>2</sup> masterfully synthesized all facets of the campaign in The Campaign of Trafalgar.<sup>3</sup> Offering the French perspective, Colonel Éduoard Desbrière wrote the "classic French account,"<sup>4</sup> Trafalgar: The Naval Campaign of 1805. Corbett pays a grateful tribute to Desbrière, acknowledging the Colonel's account as

"monumental works . . . they place us for the first time in a position to see the campaign as it really was."<sup>5</sup> The second advantage that study of this campaign presents is the opportunity to examine at the operational level this classic period of naval warfare. The third advantage is that comparing this campaign to the Falklands War Naval Campaign of 1982 will contrast two eras significantly differing in technology.

As developed in the previous chapter, at the most fundamental level, maneuver warfare seeks the psychological defeat of the enemy by destroying his cohesion and will to resist. This destruction is achieved by disrupting his decision cycle by presenting cascading unexpected and threatening situations by assailing his center of gravity at a tempo at which he can not respond. This chapter provides evidence supporting the opinion that the British campaign operated within this concept. Specifically, through maneuver, the British consistently frustrated French plans destroying the Combined Fleet's cohesion and will to resist. Guided by a common strategic sense, the British admirals operated at a high tempo constantly threatening the French center of gravity, the Combined Fleet, and, in the end, dealt a death blow to Napoleon's invasion plans of England.

This chapter is organized in the following manner: an overview of the British strategic objectives; a discussion of British and French maritime traditions and their leaders; a summary of the campaign phases; a discussion of the British operational objectives; and, finally, a detailed discussion of the evident maneuver warfare concepts.

### The British Strategic Objectives

The Trafalgar Campaign was forged within the confines of the British strategic objectives, both traditional and immediate. Of these, the preeminent objective was to maintain the balance of power in Europe thereby ensuring no single nation could rise to command sufficient resources to cross the English Channel and invade Britain. Since the Elizabethan Age, this objective had served Britain well. R. Wernham remarked in Before the Armada that Britain kept an every-watchful eye "on the continental Powers, to see that the balance never swung too sharply towards either . . . to keep the coast . . . from falling under a single master."<sup>6</sup> To Britain's alarm, however, the balance had swung precipitously to the French.

The Treaty of Amiens provided only a brief respite for Britain before she was forced to continue her quest to restore the balance of power. In The Rise and Fall of British Naval Mastery, Paul Kennedy wrote:

once again, the British faced the problem of how to defeat a country which was not greatly susceptible to the workings of sea power but which possessed the potential--under Napoleon's genius and drive, at least--to conquer Europe and to threaten the security of the British Isles.<sup>7</sup>

The British Prime Minister, William Pitt the Younger, grasped the importance of continuing the offensive against Napoleon. Central to his offensive strategy was the formation of the Third Coalition.

With a Napoleon's Army encamped along the English Channel, Pitt recognized Napoleon's vulnerability was the eastern flank. By threatening the eastern flank, the Third Coalition would reduce the chance of invasion. The British fleet was crucial to ensure access to

this flank.<sup>8</sup> Command of the Mediterranean was essential to safeguard British freedom of operation in support of a continental war. Closely intertwined with command of the Mediterranean was the cornerstone of Pitt's Coalition, the membership of Russia.

Russia was vitally interested in the Mediterranean for several reasons. First, Russia had placed the Kingdom of Naples under its protection. Second, Russia desired sovereignty of Malta for the Czar was the head of the order of the Knights of Malta.<sup>9</sup>

Malta played a unique and pivotal role during this period. Malta, a decisive point, straddled the lines of communication between the western Mediterranean, the eastern Mediterranean and the central Mediterranean, including the Adriatic Sea. Having recently gained control of Malta, the British were reluctant to yield or lose control of that island. Corbett wrote, "Malta . . . is to the central Mediterranean what Gibraltar is to its western mouth, an almost impregnable fortress."<sup>10</sup> Control of Malta became the major obstacle between Russia and Britain in concluding a treaty to establish the Third Coalition.

Besides Russia's interest in gaining control of Malta, Russia also requested the British to station a British corp of troops there to support the Kingdom of Naples. Russia viewed this corp of troops as a symbol of British commitment. Corbett emphasized the importance of these troops:

the expedition continued to be for Russia the test of England's inclination and ability to carry out her part of the proposed bargain, the pledge that she was not playing the merely selfish part of turning Napoleon's efforts away from her own frontiers.<sup>11</sup>

To ensure the safe arrival and continued garrisoning of troops in Malta also required British command of the Mediterranean.

To summarize the discussion of the British strategic objectives, the preeminent objective evolved from the tradition of maintaining the balance of power in Europe. Napoleon upset that balance, and Pitt began forming the Third Coalition in response. Pitt considered Russian membership crucial. Russia, in addition to Austria, would provide the land forces that would threaten Napoleon's eastern flank. British command of the Mediterranean was essential to Pitt's strategy. Command of the Mediterranean would allow freedom of operations in the Mediterranean to support the eastern flank and would gain Russian membership in the Coalition. Corbett strongly emphasized the importance of understanding these objectives, for they formed the strategic framework of the Trafalgar Campaign. He wrote:

To approach the Trafalgar campaign without these two factors [support of continental war and an offensive return] clearly in view is to misconceive it from end to end. To judge it as a defensive campaign, to regard Trafalgar as having been fought purely for the security of these British Islands is to misjudge the men who designed it, and, above all, the men who fought it with such sure and lucid comprehension.<sup>12</sup>

Who were these men that conceived and fought this campaign?

#### The Navies and Their Leaders

Compared to the French and Spanish, the British possessed more experienced sailors and leaders enriched by a superior tradition. Years of blockade duty and combat during the wars with France finely sharpened their seamanship and fleet skills. Kennedy wrote:

the constant exposure to Atlantic storms and Channel fogs also had positive consequences for the service, whose seamanship was of an exceedingly high standard . . . although British warships were,

vessel for vessel, slower than their adversaries, the squadrons could manoeuvre more swiftly and more precisely because of their greater discipline, efficiency and cohesiveness.<sup>13</sup>

In contrast, the French and Spanish fleets lacked similar experience as their ships had been laid up in harbor by the blockade. Few sailors had seamanship experience, nor were their captains well practiced in fleet tactics.

The French and Spanish faced a "remarkable galaxy of naval talent."<sup>14</sup> Nelson towered above them all with his combination of flair, leadership, strategic grasp, and tactical genius. In his august company were the tough and stern John Jervis, victor of the Battle of Cape St. Vincent, the patient and insightful William Cornwallis, Commander-in-chief of the Channel Fleet, and many others including Duncan, Keith, Howe, Hood and Collingwood. Each had been trained by the rigorous school of sea and war advancing from midshipman to admiral. For example, Cornwallis served as a midshipman at Hawke's victory over the French at Quiberon Bay in 1759. In 1782, he commanded the seventy-four gun Canada at Rodney's victory over French Admiral de Grasse at the Saints, and in 1801, he was appointed the Commander-in-chief Channel Fleet.

Common to these admirals and their captains was the "widespread willingness to take risks and to heed the Nelsonic motto that 'no captain can do very wrong if he places his ship alongside that of an enemy.'"<sup>15</sup> This willingness typified their fighting spirit and marked a significant departure from the strict line tactics that had dominated the British since the Dutch wars. Their eagerness for close battle also exploited the significant firepower advantage of the carronade, a short-

range, quick-firing, easily maneuverable, heavy-shot cannon.<sup>16</sup> What of the French admirals?

The French also had a history of remarkable and talented admirals, such as de Grasse and Suffren. The French Revolution, however, decimated their ranks as most of the experienced officers, primarily Royalists, were dismissed. Men from the gun deck, with no experience in commanding fleets, were advanced to the rank of admiral with generally disastrous results. Kennedy commented:

Throughout the eighteenth century the French navy had shown circumspection and prudence in battle rather than initiative, and the revolution led to the dismissal of many royalist officers and to further deterioration in morale; ideological fervour and élan might create wonders in land battles, but to work a large fleet competent officers, trained crews and years of experience were required. This the French, with rare exceptions, did not possess.<sup>17</sup>

Admiral Villeneuve was not one of the rare exceptions.

In The Price of Admiralty, John Keegan wrote that "Villeneuve was certainly no one's first choice for a command of such importance; he succeeded by default."<sup>18</sup> Born to family with a rich sea-faring tradition, Villeneuve joined the navy at the age of fifteen. As a midshipman, he served under Suffren, the victor against the British off Madras and Ceylon.<sup>19</sup> He continued to advance in rank eventually commanding the rear squadron of Brueys' fleet at the Battle of the Nile where he and some of his squadron escaped destruction by Nelson.<sup>20</sup>

Napoleon's most competent admirals, Ganteaume and Latouche-Tréville, commanded, respectively, the Brest and Toulon Fleets. The death of Latouche-Tréville vacated the command at Toulon. Minister Denis Decrès, the French Naval Minister, hand-picked his long-time

friend, Villeneuve, to fill the vacancy. Villeneuve's fitness for such an important command was questionable. In Trafalgar: Countdown to Battle 1803-1805, Alan Schom provided an illuminating glimpse into the mind of Villeneuve:

Villeneuve's pathetic outbursts at Toulon prior to weighing anchor could at very best have been attributed to a temporary attack of nerves, as a result of overwork, perhaps, but all his actions since that time had proved that not only was he totally unfit for the post but was undergoing some sort of mental breakdown and was almost out of control, writing to Decrès, "I cannot conceal my belief that we have no chance of winning. . . . My lord, put an end to this situation."<sup>21</sup>

Such was the state of mind of the man entrusted to play the pivotal role in Napoleon's invasion plans.

This comparison between British and French highlights several important factors in the Trafalgar Campaign. First, the British had an underlying sense of superiority over their enemies. The British naval tradition--rich and victorious, the experience of their sailors and fleets, and their outstanding leaders supported their feeling of superiority. The French were less fortunate. Their naval tradition--broken by the Revolution, the inexperience of their men and fleet--laid up by blockade, and their mediocre leaders contributed to their feeling of inferiority. From the outset of the Trafalgar Campaign, the French faced a psychological disadvantage--a disadvantage that would have to be surmounted by the soundness of their plans. Unfortunately for the French, Napoleon's plans did not fulfill this requirement.

### The Phases of the Campaign

Napoleon first planned for the Toulon and Rochefort fleets to wreck havoc in the British West Indies. Notably absent were intentions for any of the fleets to force the English Channel. Desbrière wrote:

The Toulon and Rochefort squadrons had been given an objective which at that time had no connection with an invasion of England . . . neither Villeneuve . . . nor Missiessy were given any instructions that could lead them to suppose their operations were to be part of a comprehensive plan of campaign.<sup>22</sup>

Napoleon modified his West Indies plan with the plan of 2 March 1804. The grand design of this plan was to join the combined fleets in the West Indies and to proceed to the English Channel in support of the invasion of England. Admiral Ganteaume's Brest Fleet was to: evade the blockade, proceed to Ferrol attaching French and Spanish forces there, and proceed to the West Indies to join Missiessy and Villeneuve. The combined fleet would then make for the Ushant, attack the British forces and proceed to Boulogne to escort the invasion flotilla.<sup>23</sup> The first plan and the modified plan of 2 March guided the first two phases of the campaign.

The Trafalgar campaign unfolded in four phases: Villeneuve's escape from Toulon and arrival in the West Indies; Villeneuve's departure from the West Indies and arrival in Ferrol; Villeneuve's departure from Ferrol and retirement to Cadiz; and Villeneuve's standing out of Cadiz to battle Nelson.

Evading Nelson, Villeneuve escaped from Toulon on 30 March.<sup>24</sup> The Toulon fleet left the Mediterranean and headed for the West Indies to rendezvous with Ganteaume's fleet in accordance with the 2 March plan. Although Ganteaume was aware that the ultimate objective of the combined

fleet was Boulogne, Villeneuve was not. His orders only stated for him to wait forty days for Ganteaume, and if Ganteaume did not arrive, to return to Cadiz. Desbrière wrote:

As yet, nothing authorized them [Villeneuve and General Lauriston] to suppose their mission was to be combined with the great operation of a descent on England.<sup>25</sup>

Eventually, Villeneuve learned of the true objective when he received the 14 April change to the 2 March plan. Napoleon modified the plan because Ganteaume was unable to break Cornwallis's blockade. Ganteaume was to remain in Brest. When proper and prudent, Villeneuve was to return to Europe via Ferrol to join Gourdon and then proceed to Brest to join Ganteaume. The Combined Fleet would then sail to Boulogne to join Napoleon.<sup>26</sup>

The 14 April plan was significant for this was Villeneuve's first opportunity to appreciate the immense importance of his mission.

Desbrière wrote:

Was not a demand, so exacting and unforeseen regarding the past, certain to disquiet profoundly one who had such an onerous task in prospect? . . . What opposition would be met with? What events might not occur during such a long interval? What part would Nelson's squadron play, which Villeneuve might expect to see appearing at any minute? All these questions must have weighed heavily on the Admiral's mind; and it would have required a character exceptionally tempered to contemplate them with equanimity.<sup>27</sup>

Desbrière observations reflect the possible turmoil existing in Villeneuve's mind. With Nelson's arrival in the West Indies, Villeneuve decided the time was proper and prudent to return to Europe.

The Combined Fleet set course for Ferrol to join Gourdon with intentions to then proceed to Brest. Corbett identified two fundamental flaws in the course of action Napoleon chose for Villeneuve:

Napoleon, in short, omitted from his calculations two primary conditions of naval warfare; one--that at sea there was a lee and a weather gage which did not enter into analogous problems on land, and the other, that it is impossible to tell under a day or two whether a naval blockade has been raised or not.<sup>28</sup>

Corbett alluded to the problem confronting Villeneuve: the Combined Fleet would have to fight its way to Brest without the aid of Ganteaume's fleet. An understanding of the "two primary considerations" supports Corbett's observation. For Ganteaume to escape Brest would require favorable winds, but the winds favorable for Ganteaume would not be favorable for Villeneuve to close Brest. Additionally, the minimum time required for Ganteaume to determine that Cornwallis had lifted the blockade and decide to weigh anchor would provide sufficient time for Cornwallis to fight Villeneuve before Ganteaume could assist Villeneuve. Villeneuve's fleet alone would have to defeat the British forces blocking his entry into the Channel.

The first force Villeneuve encountered upon his arrival in European waters was Calder's squadron on 22 July. The resulting two-day engagement was indecisive and has been referred to as Calder's Action of 22d July. Following this action, Calder retired north to close Cornwallis, and Villeneuve headed for the nearest available ports to repair battle-damaged ships. The Spanish anchored at Ferrol, the French at Corruna. When repairs were completed, Villeneuve set sail, with two possible courses of action : proceed north to Brest or proceed south to Cadiz. Because of events to be discussed later, Villeneuve chose the latter and headed for Cadiz.

The Combined Fleet arrived in Cadiz on 22 August. Concerning his decision to abandon the attempt to reach Brest, Villeneuve wrote:

The enemy had evidently taken measures to defeat it and that the concentration of their forces was at that minute more considerable than in any previous circumstances and being such that they were able to oppose the united forces of Brest and of Ferrol with superior strength; not anticipating therefore any chance of success in this state of affairs. . . . I determined on the third day after my departure . . . to steer for Cadiz.<sup>29</sup>

Villeneuve's decision effectively ended Napoleon's plans. With the French Navy unable to gain control of the Channel, Napoleon was forced to abandon his invasion of England. Corbett observed, "In Decrès opinion, if Villeneuve were gone to Cadiz, it must put an end to the great enterprise against England."<sup>30</sup>

As an aside, a famous story originated from this affair. On 13 August, Napoleon was told that Villeneuve had anchored at Cadiz. Corbett wrote:

It is this day that Daru, the head of his War Office staff, tells the well-known story. The Emperor sent for him, and he found him raving up and down the room railing coarse abuse upon the unhappy Admiral. Then, suddenly stopping, he cried, "Sit down, there and write," and with that he dictated without a check the whole of the orders for his immortal campaign of Austerlitz.<sup>31</sup>

The British campaign had thwarted Napoleon's invasion, but forced from the sea back to land, Napoleon had a more masterful stroke awaiting the Third Coalition.

Although Napoleon had abandoned the invasion, he still had plans for the fleet. First, he decided that the Combined Fleet should sail for Naples disembarking troops there.<sup>32</sup> Second, he ordered Decrès to replace Villeneuve. Decrès selected Admiral Rosily, and Rosily set off for Cadiz.

Because of these plans, Desbrière held Napoleon responsible for the Battle of Trafalgar. Although Decrès tried to convince Napoleon

that the orders for the Combined Fleet would be disastrous, Napoleon remained unswerved. Desbrière wrote:

Nevertheless Napoleon altered none of his dispositions, although he was plainly warned that any sortie from Cadiz would inevitably lead to a great battle. That decisive engagement--to which he had always refused his consent when the success of his combinations depended on it--he was about to bring on without any general plan of operations, and merely for the absolutely secondary object of landing some troops on the shores of the Neapolitan kingdom.<sup>33</sup>

With these short-sighted orders, Villeneuve finally decided to act. Villeneuve had gotten wind of his impending replacement, and upon hearing of Rosily's arrival in Cadiz, decided to weigh anchor.

Desbrière wrote:

At last on the 18th, the news reached Cadiz that Rosily had arrived and "common rumour" gave out that he was come to supersede Villeneuve. This last blow was too much for the luckless Admiral and it was decided to sail next day; especially as an apparent weakening of the English force by 6 line-of-battle ships seemed to justify his desperate act.<sup>34</sup>

As a result of Napoleon's intractable actions and Villeneuve's last grasp to regain his pride, the Combined Fleet set sail to give Nelson his desired battle.

#### British Operational Objectives

The proceeding section provided a concise chronology of the major phases of the campaign. The phases were shaped by British actions consistent with their operational objectives, to maintain command of the Mediterranean and of the English Channel.

As previously discussed, establishment of the Third Coalition hinged on command of the Mediterranean. By gaining control of Sicily or southern Italy, Napoleon would threaten British command of the Mediterranean, and he would also gain access to Turkey or India further

threatening British interests. The loss of Sicily would be particularly hard felt for it was a critical logistics base for the British. Corbett observed, "for without Sicily as a base of supply the position of our fleet in the Mediterranean would be very difficult to maintain."<sup>35</sup> That Sicily weighed heavily in Nelson's mind was confirmed by his decision, upon hearing of Villeneuve's escape from Toulon, to head east towards Sicily.

The second operational objective was to maintain command of the English Channel. The principal force in guarding the entrance to the Channel was the Western Squadron commanded by Cornwallis. The Home Fleet, commanded by Keith, supported the Western Squadron. With this operational objective in mind, Calder chose not to continue his action against Villeneuve. Corbett commented, "that so long as he [Calder] maintained a position which forbade Villeneuve to gain his object without fighting, he secured the fruits of his victory."<sup>36</sup> An incidental mission of the Western Squadron was to blockade the French fleet at Brest.

To achieve both operational objectives, the Admiralty and both Nelson and Cornwallis realized that the dislocation and eventually the destruction of the Toulon Fleet was the key to success. They realized that the Toulon fleet was the French operational center of gravity, the force upon which Napoleon's invasion depended. Corbett supported this observation when he wrote:

The actual situation at our point of contact with Russia turned upon the command of the Mediterranean, and that depended on Nelson's power of controlling the Toulon fleet--not necessarily blockading it, but, as he preferred to say, on "holding it in check" till it could be met and destroyed.<sup>37</sup>

Nelson believed that he achieved this objective when he wrote, "by my vigilance the enemy found it was impossible to undertake any expedition in the Mediterranean."<sup>38</sup> Corbett continued with, Nelson "began to see, as indeed it proved, that his driving Villeneuve through the Straits was a strategical success."<sup>39</sup>

Having forced the Toulon Fleet out of the Mediterranean, the British had dislocated the center of gravity; remaining was the task of destroying it. Disagreement existed, however, on whether or not this task was necessary. Pitt was more concerned in preventing Villeneuve's fleet from interfering in the Mediterranean. Corbett wrote:

In Pitt's eyes the function of the fleet was fulfilled if it succeeded in sealing up Villeneuve's fleet so that it could not interfere with his combined flank attack on Italy. . . . Nelson's preoccupation, on the other hand, was to force it to sea and destroy it, knowing full well the precariousness of a long winter blockade on the capricious Andalusian coast.<sup>40</sup>

Barham, the First Lord of the Admiralty, agreed with Nelson.

Barham recognized that destroying the French fleet instead of sealing up the fleet would have a greater and longer-term effect, a lasting morale effect. Corbett quoted Barham:

"The interception of the fleet in question," he[Barham] concluded, "on its return to Europe would be a greater object than any I know. It would damp all future expeditions and, would show to Europe that it might be advisable to relax in the blockading system occasionally for the express purpose of putting them in our hands at a convenient opportunity."<sup>41</sup>

Through Barham's and Nelson's persuasive arguments, Pitt relented and, through Nelson's appointment to command the blockading fleet, agreed to the destruction of the French fleet.

### Maneuver Warfare Concepts

The British defeated the French by destroying their cohesion, destroying their will to resist, and disrupting their decision cycle. The British achieved these feats by operating at a sustained high tempo seriously unnerving Villeneuve. The success of the British actions appeared in the letters of General Lauriston, officer-in-charge of troops in Villeneuve's fleet. On 21 August, he wrote to Napoleon:

I am truly humiliated at finding myself present at so many ignominious manœuvres [sic], powerless to do the slightest thing for the honour of Your Majesty's flag. We sail like a fleet of merchantmen who fear the attack of four or five of the line and it is a single man who is the cause of all this.<sup>42</sup>

This single man was Villeneuve.

Delving further finds evidence of the destruction of the Combined Fleet's cohesion. Fleet discipline, granted weak at the first sailing of the Combined Fleet from Toulon, showed little improvement despite the months at sea. Lauriston commented, "Attention is no longer paid to signals, which are kept flying on the masts two or three hours. Discipline is completely gone."<sup>43</sup>

Several factors worked together to destroy the French and Spanish will to resist: Nelson's unlocated fleet, the British willingness to attack with an inferior force, and Nelson's chase of Villeneuve across the Atlantic. The most important of these was the psychological effect of Nelson's unlocated fleet. Two examples stand out. First, on entering Cadiz to rendezvous with Gravina, Villeneuve was so concerned with Nelson that he did not wait for the Spanish to weigh anchor. Desbrière wrote:

But the same inopportune haste that had caused the failure of the junction with the Spanish Squadron at Cartagena almost occasioned the failure of the union with Admiral Gravina's forces . . . [Villeneuve to his flag-lieutenant] "every minute was precious, that the enemy's Mediterranean squadron must be in pursuit and might effect a junction with the force that had blockaded Cadiz up till then and that it was essential to set sail for our destination."<sup>44</sup>

In defense of Villeneuve, Gravina shared his impatience. Villeneuve wrote, "Admiral Gravina replied 'that he shared my impatience and that I could make the signal to get under way and that he would repeat it at once to his squadron.'"<sup>45</sup> The French and Spanish ships of the Combined Fleet would not actually combine until their arrival in the West Indies.

In the second example, Desbrière wrote that when the Combined Fleet departed Ferrol and headed for Cadiz:

The specter of Nelson's unlocated fleet was still haunting, the Admiral, and his cruisers, mistaking signals, kept sending in confused reports of squadrons in the vicinity. At the last moment they told how a Swede had recently seen eight vessels within the Straits and twelve more at Gibraltar, besides the three before Cadiz. "It is Nelson," cried Villeneuve, "who is there with twenty-three of the line." Fearing an immediate attack on his cumbrous fleet, his only idea was to get it into safety as soon as possible.<sup>46</sup>

Both examples illustrate how Nelson's unlocated fleet unnerved Villeneuve.

The British willingness to attack with an inferior force had a similar unsettling effect. For example, Nelson chased Villeneuve across the Atlantic with an inferior force and was willing to give battle if offered. Corbett wrote:

The moral effect of Nelson's implacable chase had been extraordinary, and every one in his heart believed he was somewhere below the horizon with Calder waiting till he had them well away from their port to strike his blow.<sup>47</sup>

The factors of Nelson's unlocated fleet, the British willingness to attack with an inferior force and Nelson's chase across the Atlantic combined to destroy the will of the Combined Fleet.

Keegan provided an excellent summary of the psychological influence the British exerted over Villeneuve:

The disintegration [of Napoleon's designs] had been brought about, however, not by any direct application of British force--Calder's action off Finisteree and Cornwallis's skirmish with Ganteaume scarcely counting--but by fears and spectres with which five months of oceanic rambling had filled Villeneuve's mind. Napoleon's jibes, threats and draconian orders had fed those fears; worry at the poor state of his ships and members of his crews had sapped his will to resist them; but in the last resort it was the image of an implacable Nelson--dogging his footsteps, lying in wait for him, anticipating his every move--that had raised them to the level of the unbearable.<sup>48</sup>

Villeneuve was subjected to a multitude of pressures which he was ill-suited to cope with, but Keegan rightly emphasized that most important of pressures burdening Villeneuve, the "implacable" Nelson.

Shifting focus to Villeneuve's decision cycle, the following examples illustrate its disruption: the arrival of Nelson in the West Indies, the deception of the blockade, and the previously mentioned influence of the unlocated fleet. As instructed in Napoleon's plan of 2 March, Villeneuve was to wait in the West Indies for the arrival of Ganteaume. The plan of 14 April changed the conditions for Villeneuve's departure. Since he was to now join Ganteaume off Brest, Villeneuve could depart when he thought proper and prudent but not earlier than thirty days after the arrival of Admiral Magnon.<sup>49</sup> Admiral Magnon's small force arrived in the West Indies on 4 June. On 8 June, Villeneuve learned of Nelson's arrival at Barbadoes. On 11 June, the Combined Fleet set sail for Europe.<sup>50</sup>

The arrival of Nelson in the West Indies disrupted Villeneuve's decision cycle. Expecting that Nelson would have headed for Egypt, Villeneuve thought he had sufficient time to attack several British colonies before returning to Europe. Nelson surprised Villeneuve, forcing Villeneuve to make the decision to either comply with Napoleon's orders and wait till 4 July to sail for Europe, or disregard them and set sail immediately.<sup>51</sup> In his opinion, to have waited in the West Indies would have resulted in engaging Nelson. Even if victorious, fighting Nelson would have rendered his return to Europe nearly impossible because the West Indies did not have the facilities to conduct necessary repairs following a battle.<sup>52</sup> Corbett summarized, "In his eyes it made every enterprise against the enemy's [British] possessions impossible."<sup>53</sup> Nelson's arrival in the West Indies disrupted the French decision cycle forcing Villeneuve to disregard Napoleon's orders.

The commander of a blockading fleet could use deception to his advantage. For example, the commander could establish a loose blockade, concealing his strength. Depending on what advantage he desired, he could exploit this deception. The commander could feign weakness, enticing the enemy to sortie then engaging with his superior forces. The commander could display strength, then quickly withdraw to send detachments off for repair, replenishment, and so on.

Unlike Calder who kept an inshore squadron, Nelson established a loose blockade of Cadiz to entice Villeneuve to sortie. Corbett wrote of Nelson's blockade:

But the truth would seem to be that Nelson's arrival had once more dominated the spirits of the French Admiral and most of his colleagues. Ever since he had joined nothing had been seen of the fleet from the signal stations except an inshore squadron of five cruisers, with an occasional glimpse of communicating ships of the line. Nelson must be there, but what he was doing and what his strength no one could tell.<sup>54</sup>

Nelson did not lose touch, however, for Schom observed:

Although keeping most of his fleet about fifty miles or so to the west over the horizon from, and thus well out of sight of, Cadiz, he maintained a very close watch on that harbour with some fast-sailing frigates under the command of Captain Blackwood in order to lure them out.<sup>55</sup>

Nelson maintained a close watch prepared to pounce on Villeneuve if he sailed.

Besides having the aforementioned psychological effect, the unlocated fleet also disrupted the French decision cycle. When Villeneuve escaped from Toulon, Nelson had to decide where to commence his search for Villeneuve. With the greatest risk being the seizure of Italy or Sicily, Nelson chose to head east. Corbett quoted Nelson, "'If they are not there,' he said, 'the squadron will be back again by the end of June--in short, before the enemy can know where I am.'"<sup>56</sup> Nelson's reasoning was that the phantom of his fleet would float in Villeneuve's mind, influencing his decisions in the absence of real knowledge. How rightly he calculated the factor is also seen in Napoleon's indecision on Nelson's intentions or in what quarter the "fougueux amiral" would reappear.<sup>57</sup>

Nelson also used deception to shield his arrival to relieve Calder. Concerned that French knowledge of his arrival would dissuade them from weighing anchor, Nelson took actions to prevent such knowledge from spreading. He wrote British authorities in Lisbon issuing

directions that they keep his arrival secret.<sup>58</sup> He even forbade the firing of salutes. Despite Nelson's precautions, on 2 October Villeneuve learned of Nelson's arrival.<sup>59</sup>

From the foregoing discussion, the psychological defeat of the French and Spanish is clearly evident. Their cohesion and will to resist had been seriously weakened. The British had successfully interrupted their decision cycle. These weaknesses fed on each other to a devastating affect and culminated in the Combined Fleet War Council which met to consider Napoleon's order for the fleet to leave Cadiz for Naples. The Council decided to refuse Napoleon's orders, a remarkable decision reflecting the bleak state of affairs in the Combined Fleet.

How were the British able to achieve such an impact? The answer lay in their ability to operate at a high tempo. This ability originated from two characteristics. First, the senior admirals were embued with an innate strategic sense which functioned as commander's intent. Second, they were granted the latitude and authority to act within a wide scope of their orders, effectively, mission tactics. With these capabilities, the fleet commanders were able to operate with a common strategic sense, having the flexibility of decentralized control.

These characteristics developed from the British conduct of naval warfare during the Age of Sail.. With far flung forces throughout the world and the slow means of communication between these forces and London, London had to permit their commanders greater flexibility.

Geoffrey Bennett wrote:

When communications were as slow as they were in the days of fighting sail, commanders needed to act on their own initiative; and it was the readiness with which Britain's admirals and captains shouldered this responsibility, coupled with their experience and

understanding war at sea, that was to play havoc with Napoleon's plans.<sup>60</sup>

The initiative was guided by their rich tradition.

Centuries of experience had developed the body of tradition from which sprung the admirals' innate ability to act consistently within the historical strategic concepts that had guided British policy. Corbett summarized this concept when he wrote:

It was a belief of the old Spaniards that Drake had a magic mirror in which he could see all the movements of his enemies and count their numbers. In a sense it was true, and in that sense he had handed it on to his successors. That mirror was the tradition he had founded, and they had polished it by rich experience till it became a living instinct for naval war to which every man could turn for guidance.<sup>61</sup>

Corbett further added:

So wide was the theater, so slow the means of communication and so precious every rare item of news, that sharp necessity had developed an acuteness of sense that gives at times an impression of second sight. The whole service was as it were irradiated with an alert sympathy, a mutual understanding between the War Staff and the fighting lines, by which admirals afloat seemed always to see into the mind of the Admiralty and the Admiralty to rest assured of what the admirals would do. It was a factor in the struggle which Napoleon failed to take into account, or even to appreciate.<sup>62</sup>

This "rich experience" can not be underestimated when examining the British success for it permitted the British to rapidly maneuver their forces to counter Villeneuve. Two examples are illustrative: Cornwallis's decision to split the Western Squadron; and Nelson's decision to depart the Mediterranean.

The Western Squadron had the traditional role of guarding the access to the Channel. Corbett quoted Desbrière:

It was this sure hold of British naval opinion on the unbroken tradition that was to render Napoleon's invasion as impossible as all the attempts of his predecessors. "Unhappily," says Colonel Desbrière in speaking of the discredited French belief in a

surprise of the Channel, "the English had long got wind of this danger, and convinced of its gravity had given a standing order, thanks to which the entrance of the Channel was fated to be held in crushing force. All the Napoleonic plans could only dash themselves to pieces against this primordial device so imperturbably followed."<sup>63</sup>

Their observations highlight the traditional response of the British admirals to focus on the entrance to the Channel if its control were threatened.

With Villeneuve returning to Europe from the West Indies, What if he chose to head for the unguarded approaches to the Mediterranean? Admiral Cornwallis, commanding the Western Squadron, was confronted with the dilemma of choosing between ensuring control of the Channel or control of the Mediterranean. Corbett wrote:

To prevent such a movement of the Combined Fleet was, as the British war-plan stood, no less important than to overwhelm it if it came north. What then should Cornwallis do? Should he rest content with the control of the invasion theater: or should he strike to control the whole theater of the campaign? Should he be satisfied with impregnable defense, or should he risk it to deprive the enemy of all initiative?<sup>64</sup>

Because of the urgency of the situation, Cornwallis was forced to decide quickly and not wait for the orders from the Admiralty, for time was of the essence and every day of indecision would close the window of opportunity.<sup>65</sup>

Cornwallis chose to detach a force, under Calder, to guard the Mediterranean approaches and to engage Villeneuve if encountered. Additionally, Cornwallis decided to lift the Brest blockade to better position himself to intercept Villeneuve if he instead chose to head for the Channel. When hearing of Cornwallis' decision, Napoleon commented "What a chance Villeneuve has missed!"<sup>66</sup>

How has history judged Cornwallis's decision to abandon his guard on the English Channel, especially in light with the tradition previously stressed? When Cornwallis lifted the blockade of Brest, he did so with little risk argued Corbett. Corbett quoted Ganteaume, who wrote:

To attempt, he [Ganteaume] continued, "an expedition so important as that of Boulogne in a sea so stormy as the Channel, and one which is not always practicable for the boats employed in that expedition, I think we must be able to count on having the passage free for at least a fortnight. With only twenty-one vessels we should be in constant fear of seeing thirty suddenly appear, whose force would be nearly double that of our fleet."<sup>67</sup>

Ganteaume would not sail unless he expected the blockade to be lifted for over fourteen days.

Cornwallis utilized the advantage of a blockader to provide sufficient time to intercept Villeneuve without undue risk of Ganteaume sailing. Cornwallis balanced the importance of the Mediterranean to the overall British strategy with the safety of the English Channel. Through his initiative, he created a force, Calder's squadron, that was capable of decisively engaging Villeneuve, while at the same time maximizing his opportunity to do the same. Cornwallis seized the initiative in choosing to go to the force that threatened the Channel instead of waiting for it to come to him. Cornwallis's decision, made in the absence of orders from the Admiralty, exactly paralleled what Barham had intended.

Another illustration of the "rich experience" of the British was Nelson's decision to depart the Mediterranean. Corbett wrote:

It was an old but now forgotten tradition which throws much light on Nelson's great movement, that in such an eventuality as had occurred the Commander-in-chief in the Mediterranean should send or follow with a proportion of his force large enough to make the

British squadron in the threatened area superior to that of the enemy.<sup>68</sup>

Once Nelson had confirmed that command of the Mediterranean was not threatened, his movements conformed with established tradition when he chose to depart the Mediterranean. His first action upon leaving the Mediterranean was to verify the safety of the Channel. Nelson wrote:

The Fact that they have joined the Spanish line-of-battleships, from Cadiz, seems to me to prove that it is not their intention to go to the West Indies or to Brazil, but rather to raise the blockade of Ferrol, and to proceed from there to Ireland or to Brest, for I believe that Villeneuve has troops on board. If therefore I have no intelligence I shall leave Cape St. Vincent and station myself fifty leagues west of the Scilly Isles, approaching slowly in such a way as not to miss a ship that might be bringing me orders. My reason for taking this position is that from there I can equally well join the Fleet which is before Brest or go to Ireland.<sup>69</sup>

With what little information Nelson held of Villeneuve's intentions, Nelson left the Mediterranean in pursuit, closing the Channel to assist Cornwallis, if necessary, while at the same time in position to respond to a threat to Ireland.

Of Barham, Corbett wrote, "Barham's first thought was for the safety of the West Indies."<sup>70</sup> However, Barham expected the actions Nelson had undertaken, "it is no matter of surprise to find the Admiralty expecting that Nelson would act on the well-established tradition."<sup>71</sup> Both Barham and Nelson, separated by hundreds of miles, reached the same conclusion and acted in the same manner.

Desbrière's observations paralleled those of Corbett. Admiral Collingwood received orders that if Nelson had not pursued Villeneuve to the West Indies he was to pick up the pursuit. On 5 June, the Admiralty

received letters dated May 6th, 7th and 9th indicating Nelson's intentions to follow Villeneuve to the West Indies.<sup>72</sup> Desbrière wrote:

Thus it was clear that the idea of a Franco-Spanish expedition to the West Indies was familiar to the English admirals . . . If Nelson had not gone in pursuit of Villeneuve, Collingwood was ready to do so. . . . At the same time the general old-established rule that all detachments should concentrate off the mouth of the Channel was put in practice. . . . Under these conditions a diversion, however remote, had little chance of success.<sup>73</sup>

Both the example of Cornwallis and Nelson illustrate the depth of their operational and strategic grasp. Their initiative and decisive action resulted in continual pursuit of Villeneuve. Their actions were made before explicit orders were received from the Admiralty. This ability and freedom to act in concert with the strategic and operational objectives were instrumental in their achieving such a high operational tempo.

Digressing to examine the tactical level, several maneuver warfare concepts were employed at the Battle of Trafalgar. For example, the British fought the battle in the absence of written orders. Nelson's Memorandum of 10 October, written four days prior to the battle, served as the commander's intent. Between 10 and 14 October, six ships-of-the-line had been detached to Gibraltar under the command of Admiral Louis. These six ships had an important part in the Memorandum, but no known changes were written by Nelson to reflect their absence. Corbett wrote:

By a curious chance no copy of the order actually used in the action has come down to us. Indeed, it is most probable he never prepared one for the reduced fleet with which he eventually had to engage since he did not anticipate fighting without Louis's division. The latest and only one he is known to have drawn up was issued with the Memorandum on October 10th.<sup>74</sup>

This Memorandum is important because it provided both commander's intent and mission tactics for the battle.

To illustrate the mission tactics nature of the Memorandum, one part stated that "the second in command is to have entire direction of his line after the Admiral's intentions are made known to him."<sup>75</sup> Corbett interpreted:

This could only mean that the independent direction was to begin directly Nelson had given his colleague the signal to engage, and not before. In other words, his obvious and natural intention was to conduct the approach himself and then to leave his colleague a free hand to do his special part of the work."<sup>76</sup>

Collingwood, the second in command, was given leave, when so signaled, to employ his forces as he saw fit, i.e., to accomplish his mission in accordance with the commander's intent.

In contrast, Calder's Action exemplified a battle where commander's intent was neither evident nor understood. Corbett wrote, "Not till the last moment did he [Calder] let his captains know the plan of attack, and it so happened that the van ships did not take in the determinative signal to engage the center."<sup>77</sup> The resulting confusion contributed to the indecisiveness of Calder's Action.

One additional advantage that the British Fleet had over the Combined Fleet was the improvement in fleet communications that allowed the British a more rapid means of communicating the commander's orders to his subordinates and communicating intelligence to the commander. Improvement was achieved through the development of a superior signals book developed by Sir Home Popham.

Keegan wrote that the Battles of the Saints in June 1794 and Camperdown in October 1797 "clearly indicated the only means by which

one sailing fleet could defeat another."<sup>78</sup> This means was the use of columns to cut the enemy lines and concentrate a larger friendly force on a smaller enemy force. Nelson recognized the revolutionary nature of these tactics and with the most recent advantages gained in signaling would be able to successfully control and execute such tactics. Keegan wrote, "Of the two ingredients [tactics and signaling], the signaling contribution was the decisive one."<sup>79</sup> Bennett concurred, writing that "Nelson took full advantage of this considerable step forward; but his tactical genius would not have blossomed to full flower, nor could his immortal signal been hoisted at Trafalgar, if Sir Home Popham,"<sup>80</sup> had not developed his telegraphic signals.

In summary, the British operated at a high tempo. They achieved this tempo through their "rich experience" steeped in traditional knowledge of British strategic and operational objectives and through their freedom to act within the intent of their orders. Consequently, they were able to rapidly maneuver their forces to thwart French intentions. Their maneuvers were oriented towards the French center of gravity, Villeneuve's Toulon Fleet. Villeneuve was faced with cascading and unexpected events which disrupted his decision cycle, destroyed the fleet's cohesion and destroyed their will to resist. The Trafalgar Campaign succeeded when Napoleon's plan to invade England ended with Villeneuve's decision to head for Cadiz. The Battle of Trafalgar was only a secondary manifestation of the British victory in the campaign. Napoleon was forced to adopt a different strategy to defeat the Coalition, and a new stage in the confrontation between the Third Coalition and Napoleon began. Although the Trafalgar Campaign may have

closed successfully for the Coalition, within the larger perspective,

Corbett observed:

However, on the Continent Napoleon was making great strides towards conquering and dominating Central and Western Europe and not even the greatest naval victory in British history halted this. Years of hard work and sacrifice remained to achieve that.<sup>81</sup>

Although Great Britain had established uncontested domination of the seas, the balance of power was still in favor of France.

CHAPTER 4  
THE FALKLANDS/MALVINAS WAR OF 1982

Introduction

Jumping ahead nearly 180 years, this study departs the golden era of the Age of Sail and enters the modern, perhaps the post-modern age. On 1 April 1982, Argentine marines and commandos landed on the Falkland/Malvinas Islands (henceforth referred to as the Falkland Islands). On 14 June, the British recaptured them. For the British, this war was a closely run affair for if the Argentine had been better-trained, better-equipped and better-led, the results might have been drastically different.<sup>1</sup> This unprecedented short war, which some have considered a "textbook example of limited war"<sup>2</sup>--limited in time, location, means and objectives--recommends much as a modern case study for maneuver warfare. Primarily a naval campaign, the Falklands War provides the most recent example of conditions that may exist in the next littoral war.

This war offers several advantages as a case study. First, it provides the opportunity to analyze the impact of technology change which has been so significant since the Age of Sail. Second, this war provides the opportunity to examine the use of "operational maneuver groups" other than surface fleets, namely air forces and submarines. Third, this war provides the opportunity to examine a contingency fought "come as you are."

As developed in chapter 2, at the most fundamental level, maneuver warfare seeks the psychological defeat of the enemy by destroying the enemy's cohesion and will to resist. This destruction is achieved by disrupting the enemy's decision cycle by presenting cascading, unexpected and threatening situations by assailing the enemy's center of gravity at a tempo to which the enemy can not respond. This chapter provides evidence supporting the opinion that, broadly considered, the British campaign operated within this concept. Specifically, through the combined use of two operational maneuver forces--the submarines and the amphibious task force--the British successfully attacked the Argentine operational center of gravity, the land forces on the Falklands. The British operated at a high tempo and successfully exploited the Argentine critical vulnerability, their morale. But unlike the Trafalgar Campaign, the British high tempo was a product of necessity driven by time and threat concerns and not a common strategic sense. Additionally, the Argentine employment of their air force and other advanced systems where probability of kill ratios approached one to one demonstrated the successful use of air forces as an operational maneuver force "from the land" in a maritime theater.

This chapter is organized as follows: a brief discussion of the technology advances since Trafalgar; a discussion of the conflict's background; a review of the forces and their leaders; a summary of the campaign phases; a discussion of the strategic and operational objectives; and, concluding, a discussion of the evident maneuver warfare concepts. Before proceeding with technological advances, further discussion of both the significance and limitations of the Falklands War is necessary to establish its context as a case study.

The Falklands War was one of many firsts: the first opposed large-scale amphibious operation since Inchon; the first naval campaign in an anti-ship missile environment; and the first conflict employing nuclear submarines. As a war of many firsts, several are of particular interest. As the first major conflict between a post modern navy equipped with missile defenses and an air force equipped with modern cruise missiles, the war provided an environment to closely examine the performance of these systems. Another important aspect of this war was that air superiority was never clearly established by either side, and, therefore, the war served as an example, demonstrating the challenges of an environment where command of the air remained contested.

Additionally, the war was intentionally limited. Precautionary steps were taken to minimize escalation. For example, early into the war, the British ruled out air strikes against targets on the Argentine mainland.<sup>3</sup> This deliberate restraint placed the success of the British campaign in a precarious balance, for the decision essentially established a distant sanctuary for the Argentine air force.

Besides being limited in scope, the war was waged in unique conditions that must be thoroughly understood when judging the relevance of the lessons learned. For example, the Argentine air force operated at the limit of its operational range. One hundred miles in either direction might have significantly affected the outcome. If the Falklands were 100 miles further out, the Argentine air force would have had no impact on the war. Conversely, if the islands were 100 miles closer, the Argentine air force probably would have established air

superiority and forced the British to escalate they war by attacking forces on the Argentine mainland, incurring all the associated risks.

Several post-war analysts have argued that although the war was fought using the technology of the missile age, older generation technology dominated. To draw conclusions on the operational potential of the latest generation of technology would be tenuous at best; therefore, they concluded that the technical lessons were ambiguous.

For example, Anthony Cordesman wrote:

The Falklands has, therefore, been more like the duel between the Monitor and the Merrimac than a clear lesson for the 1980s. It was a test of technology that is likely to be far more complex by the next conflict, and which is likely to make three-dimension chess look like Pac-man by comparison.<sup>4</sup>

Furthermore, others have argued that the war was decided by old truths with the first and foremost being the human dimension. Technology only served as a tool and nothing more.<sup>5</sup> Granted that the technological lessons may be limited, the Falklands War, nonetheless, was the first naval war since World War II. As such, the war provided an excellent opportunity to evaluate the impact of technological advances on naval warfare. Exactly what has changed in technology since Trafalgar?

#### Technological Changes

The technological changes since Trafalgar have revolutionized warfare and naval warfare in particular. To limit the discussion, this section focuses on those changes, brought by the industrial revolution, which most fundamentally impacted naval warfare: propulsion, submarines, air power and the missile.

The revolution in propulsion began with the advent of the steam ship. By incorporating this technology into warship design, navies were

freed of the tonnage and maneuver constraints imposed by sail. The introduction of the screw for propulsion permitted developments in hull and armament design. The aggregate effect of these propulsion developments was twofold. At the tactical level, warships gained freedom of maneuver irrespective of the winds. This freedom combined with tonnage growth fostered the move away from ships-of-the-line with broadsides to the fewer but bigger gun warships best exemplified by HMS Devastation and in subsequent battleships developed down to HMS Dreadnought and beyond. At the strategic level, the dependence upon fuel--coal in particular--limited the endurance and range of these ships. Requiring frequent refueling, warships were tethered to their bases. This restriction on the strategic movement of fleets challenged the centuries old doctrine of the close blockade last successfully used by Admiral Togo off Port Arthur in 1904.

The first revolutionary weapons platform was the submarine. The submarine posed many challenges to naval warfare. First, it added a new platform for undersea exploitation of the Whitehead self-propelled torpedo, whereas before, the torpedo had been launched from surface ships. Second, it added a significant element of surprise. Because of its stealth, the submarine became the ideal commerce raider, complicating the mission of controlling the seas to protect commerce. Combined with the relative ease in which the submarine could be cheaply mass-produced, the submarine became a means for a non-maritime state to contest control of the seas without having to risk its large battle fleet--Germany in both World Wars. With the harnessing of nuclear power for propulsion, the submarine gained virtually unlimited endurance and

independence from the surface. When armed with nuclear weapons and cruise missiles, the submarine's influence extended out of the maritime domain and reached into the most remote interiors.

Also closely linked to the revolution of propulsion and the submarine was the submarine's weapon of choice, the torpedo. The torpedo--mine and self-propelled--became the first weapon that could sink a ship with a single round. The world's navies were quick to recognize this danger. Numerous advances, for example, compartmentalization, damage control, etc., evolved from this threat, as did mine, anti-mine and anti-torpedo warfare, which signified increased fleet specialization.

The second revolutionary platform was the airplane. Combined with improvements in communications, the airplane--with its exponential speed advantage over ships--marked a major milestone in the revolution of naval warfare. The airplane offered both long range reconnaissance capability--effectively becoming the cruiser of the modern navy--and long range offensive capability. By World War II, the aircraft carrier replaced the battleship as the capital ship, becoming the "ship-of-the-line" of the modern navy.

World War II presented an illuminating contrast between the offensive capability of the airplane versus the defensive capability of the warship. At the beginning of World War II, light warships were extremely vulnerable to air power, and, during the war, air power's effectiveness grew against heavier ships, namely the battleships. Soon, the airplane became the dominant platform. As the war progressed, however, the development of proximity fuses, air search radars and more effective combat air patrol tactics better armed task forces to combat

air power, and the balance swung back in favor of the surface ship. With the introduction of the Kamikaze by the Japanese, the balance swung back to favor the airplane, with the exception of the battleship--the Kamikaze had insufficient power to penetrate a battleship's armor. The Kamikaze was an airplane with smart guidance--the pilot--on a one-way trip. This foreshadowed--along with German glider bomb--the next technological revolution, the missile.

The modern cruise missile has replaced the Kamikaze. Characterized by smart guidance, over-the-horizon range and fire-and-forget capability, the missile has become a potent anti-ship weapon. A single hit by such a weapon can have devastating results especially considering the complexity of modern ships which has increased their vulnerability and complicated their damage control. Furthermore, the complexity of modern electronics has increased the probability of mutual interference by friendly systems, for example, vital air search radars interfering with command critical satellite communications. Conversely, missile technology has been adapted for defensive purposes with warships employing missiles for area and self-defense. The Falklands provided the first conflict to assess their use in opposition.

The combined impact of these technological advances have complicated the threat environment facing a naval commander while at the same time affording him deadlier means to wage his campaign. Additionally, the lethality and speed of modern weapons have collapsed the commander's decision cycle. The long periods of inaction that characterized the Age of Sail have given way to the short and deadly periods of action exemplified by the Falklands War.

### Background

The immediate cause of the Falklands War is attributable to a clash of irreconcilable perceptions. The Argentine perception viewed a colonial power, Britain, still occupying Argentine territory. From this vantage point, they considered it outdated that a colonial power would seek to impose its rule by the use of force.<sup>6</sup> On the other hand, the British perceived the Falklands as an island inhabited by democratic peoples, primarily of British stock, who desired to remain under British protection.<sup>7</sup> The people of the Falklands preferred British rule. From these differing perceptions arose the strategic miscalculations that led to war.

Conflict over the sovereignty of the Falklands reached back to the late eighteenth century when control of the islands passed between Britain and Spain. Through a succession of events, claim of the islands remained disputed through 1811. In that year, the future Argentina, having gained independence from Spain, occupied the islands. In 1829, Argentina officially claimed sovereignty over the islands. Having never forsaken its claim, Britain protested and reoccupied the islands in 1833. The issue of sovereignty has been disputed ever since.<sup>8</sup>

More recently, several years prior to the war, the British Foreign Office concluded that the issue over sovereignty favored Argentina's position.<sup>9</sup> To resolve the dispute, Nicolas Ridley, the junior minister in charge of the affair, proposed to transfer sovereignty to Argentina and for Britain to then lease back administrative control.<sup>10</sup> This plan was vehemently opposed by both islanders and conservative members of Parliament. The ensuing uproar

forced a reversal of policy with the British government pledging that the islanders would have a voice in their ultimate fate.

In February 1982, the Argentine Junta, headed by General Leopoldo Galtiere, made a final effort to reach a settlement. With the shift in British policy which gave the islanders essentially veto authority, the Junta considered transfer of sovereignty unlikely.<sup>11</sup> The futility in pursuing a negotiated settlement was recognized, and the Junta concluded that they would never achieve sovereignty through diplomatic means.<sup>12</sup>

With this failure on the diplomatic front, the Junta opted for the military means to resolve the dispute. They began the dangerous journey of step-by-step military preparations to seize and hold the islands, hoping that the British would offer some concessions.<sup>13</sup> One step involved the announcement that forcibly taking the islands remained a viable option. The public passions aroused by this policy pronouncement enslaved the Junta to the military course of action. The growing momentum for military action began to control events, for if the Junta chose to back down, the resulting political disaster would most likely force them from office.<sup>14</sup>

One must ask the question: Why was the Argentine leadership convinced that Britain would not forcefully respond to this saber-rattling? Several reasons have been offered. First, the Junta, believing that their signals were clearly evident, thought the British were well aware of their intentions. Second, the Junta honestly did not expect a serious British reaction. General Galtieri confessed, "I'll tell you . . . that though an English reaction was considered a

possibility, we did not see it as a probability. Personally, I judged it scarcely possible and totally improbable."<sup>15</sup> Third, they--along with a host of naval experts<sup>16</sup>--considered an amphibious operation as "inconceivable."<sup>17</sup> Fourth, and probably most influential, the Junta thought they had the implicit approval of both the Americans and the British. In "Miscalculations in the South Atlantic," Richard Lebow wrote:

Stanley Hoffman, for one, has taken the line that American policy "twice fueled" the Falklands crisis. The Administration, he argues first, helped to start it by leading Argentina to believe they could get away with seizing the Islands and then made matters worse by trying to mediate a settlement instead of immediately condemning the Argentine aggression.<sup>18</sup>

One Argentine commentator later observed that "even London had given us the wink and the nod. We had the go-ahead we needed."<sup>19</sup>

The failure of the British to demonstrate their resolve both during and following the South Georgia incident granted credibility to the Junta's belief that the British had little interest in the Falklands. On 19 March, an Argentine naval transport, contracted by a private company, landed at South Georgia and disembarked a team of workmen. In what appeared to be an act of national passion, these workmen raised the Argentine national flag and sang the national anthem.<sup>20</sup> The British protested, and the Argentine Foreign Minister assured the British Government that the men would be taken off the island. This promise was not carried out, however, for, once the Junta realized the extent that this landing had caught the public's imagination, they announced that the Argentine Navy would protect the men.<sup>21</sup> The resulting British response failed to clearly signal their

extreme displeasure nor demonstrated their resolve to defend the Falklands against a similar occurrence. Given these signals, the Junta acted, and on 1 April, Argentine forces landed on the Falklands.

The foregoing discussion is crucial in understanding the Argentine frame of mind when they launched their invasion. Believing that the British would not take their action seriously, the Junta thought they could seize the islands with little risk or loss of life. This misperception figured significantly into fathoming their inadequate military preparations for the defense of the islands after seizure. Before proceeding to a discussion of the campaign as it unfolded after 1 April, a review of the men and their leaders is appropriate.

#### The Forces and Their Leaders

A common observation appearing in the post-war analyses described the quality gap in men between the two nations. In "The Fascinating Falklands Campaign," David Kenney wrote, "It was on the ground where the differences between the British and Argentine units were most apparent."<sup>22</sup> Jeffrey Record, concurred, and wrote that "the single most important ingredient of Great Britain's victory in the Falklands was the vastly superior quality of its soldiers, sailors and airmen and their cohesion under fire."<sup>23</sup> This qualitative difference between the two forces highlighted the inherent vulnerability of the Argentine forces.

Examining first the British forces, their leaders chose to send units that represented the best Britain had to offer. These units were tightly cohesive and well-trained. "Born of a 400-year tradition of overseas engagements,"<sup>24</sup> their morale and motivation was extremely high.

In "A Case Study in Cohesion," Nora Stewart commenting on their motivation wrote:

Several British NCOs [non-commissioned officers] spoke of "taking the Queen's Shilling and going where she sends us." And it mattered not where they were sent. One Para NCO said, "I thought the Falklands were someplace near Scotland."<sup>25</sup>

This NCO's attitude exemplified the depth of their motivation.

Although some have claimed that the British were all combat-experienced veterans, this was not the case. Over one-half of the men had not seen combat. Few of the officers or soldiers had participated in battle, but, they had all been trained for employment in the rigorous environment of the North Atlantic Treaty Organization (NATO). Additionally, they proudly represented their regiments' long and distinguished military heritage of frequently being sent afar to fight the Crown's wars.<sup>26</sup>

The Argentine soldiers presented the opposite case. The majority of men holding the Falklands were conscripts with little time in service or training. Though motivated, the soldiers knew they were unprepared. Stewart wrote:

Even though Argentine troops were enthusiastic about their liberation of the Malvinas . . . the Argentine conscript himself knew his own liabilities and strengths. A young 19-year-old conscript with only one month's training was well aware of his inadequate preparation. The majority of troops in the Malvinas were conscripts with scarcely one month's training. Argentine conscripts hardly knew each other, their officers or even how to load their weapons.<sup>27</sup>

This unpreparedness figured heavily into their vulnerability.

Exacerbating this unpreparedness, the Argentine leaders mixed units from different parts of the country in order that most elements of society and regions of the nation could share in the glory of liberating

their islands.<sup>28</sup> This mixing inhibited the natural cohesion that normally developed within units from the same region. In addition to this self-inflicted vulnerability, the Argentine forces had little institutional memory of battle. Their recent experiences were rooted in the internal wars against subversion.<sup>29</sup>

As for the Argentine officers, they offered an opposite example being highly motivated and experienced--experience gained in the internal wars. As a privileged class, they had major influence in the affairs of their country, frequently becoming involved in political issues. Service fiefdoms grew from this involvement fueling an intense inter-service rivalry. Of the officer corps, Stewart observed that:

Like the British, teamwork and peer bonding are particularly strong among the Argentine officer corps. Argentine officers evinced a high degree of trust with their fellow officers due to close personal relationships developed in the service academies.<sup>30</sup>

Unfortunately, this high degree of trust did not exist between the officers and their men. General Moore, commander of the British land forces, commented:

But this trust did not appear to exist between the officer corps and their troops. . . . I think that this was most tellingly demonstrated at the negotiation of the surrender when the Argentinean officers asked to keep their sidearms as a protection against their own men.<sup>31</sup>

Such was the state of affairs in the Argentine land forces.

This discussion points to significant Argentine weaknesses at the onset of the war, namely the shallowness of their morale and the fragility of their cohesion. These formed the critical vulnerability that the British successfully exploited.

### Phases of the Campaign

In the words of General Moore, Operation CORPORATE--the British operation to retake the islands--"fell into five phases:"<sup>32</sup> approach and workup; naval blockade; amphibious landing; land campaign; and post-conflict. This section focuses on the first four of the five phases.

On 1 April, Argentine forces executed Operation ROSARIO to capture the Falklands. In keeping with their limited objective to occupy the islands to establish a superior position for negotiations, their plan aimed to "shed no blood and avoid damage to British property."<sup>33</sup> Facing limited opposition, marines and commandos rapidly seized the islands, and on 2 April, the British governor capitulated.

Expecting that the British would not attempt to recover the islands, the Argentine forces made little effort to improve the islands' defenses. The marines and commandos were replaced with army conscripts. The runway at Port Stanley was not improved to support operations of high performance aircraft such as Super-Etendards and Skyhawks.

Commenting from an Argentine perspective, Juan Murguizur wrote:

There were no plans to "dig in" for a formal defense of the islands and no equipment and materials were transported to the islands to lengthen the runway at Port Stanley or construct accommodations facilities for the troops.<sup>34</sup>

This failure to make preparations to defend the islands was the logical fallout of their miscalculation of the British response.

Not expecting an invasion, the British were caught completely off-guard. Having completely misread Argentine intentions, the British had not prepared any plans for the recapture of the islands. The Chief of British Defense Staff admitted "there were not contingency plans for the operation; they had to be hurriedly improvised."<sup>35</sup> Nonetheless, the

British quickly responded, and a naval task force commanded by Rear Admiral John Woodward was rapidly assembled setting sail 5 April. Admiral Woodward operated with the understanding that he and his task force may eventually be tasked to recapture the islands. During the four weeks transit time for the task force to arrive at the Falklands, the British government utilized diplomatic and economic means to resolve the crisis.

During the approach phase, the task force trained and prepared for the anticipated military action. "It was going to take four weeks," wrote Admiral Woodward, "to get to the Falklands area--an invaluable period of military preparation, and time for the politicos to try to resolve the issue without resorting to force."<sup>36</sup> On the diplomatic front, the United Nations passed Resolution 502 calling for the withdrawal of Argentine forces prior to commencing negotiations to resolve the sovereignty dispute.<sup>37</sup> The U.S. Secretary of State, Alexander Haig, attempted to reconcile the two nations' differences, but neither side would yield on matters of principle.<sup>38</sup> A military showdown loomed closer on the horizon.

The campaign entered the naval blockade phase on 12 April when a British exclusion zone of 200 miles was established around the Falklands.<sup>39</sup> This exclusion zone was in name only until Woodward's task force arrived in the theater on 29 April. By then, Haig's efforts at mediation had clearly failed, and on 1 May, the British conducted their first military operation. A joint air attack comprised of Harriers from the task force and land-based bombers from the Ascension Islands conducted an air strike on the Port Stanley airfield.

The next day marked a significant turning point in the war. The Argentine navy had set sail intending to conduct a simultaneous air and surface attack against the British task force. One group, the Argentine carrier Veinticinco de Mayo and her escorts, was to conduct the air strike. The other group, the cruiser General Belgrano and her escorts, was to close for a surface engagement. Because of low winds and the carrier's limited speed, no aircraft were launched from the carrier group. Faced with the inability to launch his most potent weapons, the admiral commanding the two groups ordered all units to return to port. While returning to port and having just exited the 200 mile exclusion zone, the General Belgrano was torpedoed and sunk by the nuclear attack submarine HMS Conqueror with the subsequent loss of over 250 lives. On 4 May, Argentina retaliated with an air attack launched from the Argentine mainland against the British task force. HMS Sheffield was hit by an Exocet missile, and sank 10 May while under tow.

During this period, the British prepared to enter the next phase--the amphibious landing. To simulate preparation for an amphibious landing, British warships closed the East Falklands and aircraft bombarded Port Stanley. This operation deceived the Argentine ground commander diverting attention away from the actual landing site, San Carlos. On 21 May, the British commenced their amphibious assault putting 2,500 troops ashore the first day. During this phase, the British suffered severe ship losses. On the first day of the assault, HMS Ardent was hit by bombs and was sunk. On 23 May, two bombs impacted HMS Antelope but failed to explode. While experts were attempting to de-fuse the bombs, they exploded sinking the ship. On 25 May, Argentina

launched 72 planes in an all-out effort to halt the British buildup ashore. HMS Coventry was struck by three bombs and sank. More importantly, the container ship Atlantic Conveyor, carrying critical helicopters and Harriers for support of the ground campaign, was hit by two Exocet missiles and was abandoned.

By 28 May, the land campaign began in earnest with units of 2 Parachute Regiment attacking and seizing Goose Green. By 11 June, the British commenced their attack on Port Stanley. HMS Glamorgan was struck by a land-launched Exocet missile which caused significant damage, but the ship remained afloat. By 14 June, the Argentine forces, numbering 10,600 men at Port Stanley and 1,500 in the West Falklands, accepted defeat and surrendered.<sup>40</sup>

#### Objectives

The Argentine strategic objective was to gain sovereignty over the Falkland Islands. At the operational level, the objective was to seize and hold the islands. Unfortunately for the Argentines, they had not anticipated any great effort on part of the British to recover the islands. As such, defense of the islands against an amphibious assault was not envisioned until their control of the island became seriously contested. Murgurizur argued that the war was fought without any objectives:

The lack of any strategic planning, and ultimately the lack of any strategy, hamstrung our forces, handing the initiative to the enemy. We were reduced to waiting for an attack, and when it finally came, attempting to parry it, improvising as best we could.<sup>41</sup>

Despite their planning failures, the Argentine forces, through innovation and resourcefulness, seriously challenged British efforts to regain control of the islands.

As for the British, their strategic objective was to restore their sovereignty over the islands. Anticipating diplomatic efforts and economic sanctions having little chance of success, the British government decided to use military force. The supporting operational objectives included establishing and enforcing a total exclusion zone, conducting an amphibious operation to land troops, and conducting a land campaign to seize Port Stanley. The Falklands capital was considered the decisive point which the Argentine center of gravity, their land forces, guarded. In "An Analysis of the Falkland/Malvinas Islands Campaign," retired U.S. admiral Harry Train wrote, "As the seat of government, the center of population, and the location of the principal seaport and air field, Port Stanley was the key to the campaign."<sup>42</sup> This observation is corroborated by events for the Argentine forces surrendered once the British had captured Port Stanley.

#### Maneuver Warfare Concepts

Unlike the Trafalgar Campaign, the guiding hand of a common strategic sense does not interweave the evident maneuver warfare concepts into a fabric of a grand plan. Nonetheless, analysis reveals several concepts germane to this study. First, the British operated at a high tempo, gaining the initiative and disrupting the Argentine decision cycle. Second, Argentine use of their air force highlighted the potential of air power as an operational level maneuver group. Third, British submarines conspicuously damaged Argentine morale and

disrupted their decision cycle. Fourth, no British operational effect disrupted Argentine air operations. Finally, British actions at both the operational and tactical levels exploited the psychological vulnerability of the Argentine troops, contributing to the destruction of their cohesion and will to resist.

Several considerations factored into the British achieving a high operational tempo. First and foremost was time. With winter rapidly approaching, the British had a narrow window to conduct their operation. Second was the pressure from both the government and the public on the commanders for quick and decisive action.

The frequent storms and high seas of the South Atlantic made for a difficult environment in which to conduct sustained operations. With any port capable of providing repairs distant, British ship readiness was bound to degrade as the operation dragged on. This material consideration ruled out the British option of loitering off the coast playing a patient waiting game. Additionally, the onset of winter would further worsen conditions. Flight operations would be seriously curtailed if not rendered impossible, and an amphibious landing would be risky at best because a distant blockade could not prevent Argentine resupply especially by air. Lawrence Freedman summarized these concerns writing in "The War of the Falkland Islands" that:

The greatest problem was sustaining the task force in increasingly stormy and inclement weather over an extended period. Stuck on board ships the soldiers would lose combat readiness. Options to harass the enemy by small-scale raids or even troop landings on remote parts of the islands would not inconvenience the enemy sufficiently. There was little choice but to attempt a landing.<sup>43</sup>

If the British chose to wait, they would be forced to delay their landing until the next spring. The initiative would shift to the Argentines who would have sufficient time to fortify the islands.

The other factor driving the high tempo was the pressure for quick success. General Moore wrote: "I believe it is worth making the point that the pressure on both Admiral Woodward and myself was to get on and complete operations."<sup>44</sup> The land forces attack on Goose Green illustrated the magnitude of this pressure.

Between the 21 May landing at San Carlos and 25 May, the British lost three ships: HMS Ardent, HMS Antelope and the Atlantic Conveyor. Having suffered these losses without equivalent Argentine losses brought significant public pressure to bear on the British Government. Harry Train wrote:

The British Parliament perceived that public sentiment required a quick victory in the land war to justify the mounting ship losses in the Falkland Islands conflict. This perception eventually forced the political decision to attack the Argentine garrison at Goose Green.<sup>45</sup>

As an aside, the impact of these losses demonstrated the disruptive effect the Argentine air force had on the British decision cycle. The land commander was forced to interrupt his plans in order to conduct an operation of no operational importance.

In his article, "Yomping to Port Stanley," Harry Summers discussed this particular example in greater detail. General Thompson, then commanding land forces until the arrival of General Moore, had to confront both this political pressure and the pressure to establish his forces safely ashore.<sup>46</sup> Summers wrote:

From a tactical point of view, Thompson was correct in opposing the Goose Green operation as a diversion from the decisive objective at

Port Stanley. But, at the strategic level, what was overriding was the need for an immediate battlefield victory to compensate for the gloom caused by the sinking of the frigates Ardent and Antelope,<sup>47</sup> the destroyer Coventry and the container ship Atlantic Conveyor.

Victory at Goose Green became a political necessity to ensure continued public support. Both this example of the political pressure and the constraints of time drove the British to operate at a high tempo.

Turning to the air campaign, analysis of the campaign revealed the use of the Argentine air force as an operational maneuver group. The Argentines successfully used their air force at the operational level and demonstrated its potential in maneuver warfare. Additionally, an examination at the tactical level revealed its attrition nature.

An important aspect of this war was that neither side established long-term air superiority. Control of the air was continually contested. For the Argentines, their efforts to establish air superiority faced several obstacles. First, their failure to extend the Port Stanley runway denied them the advantages of having high performance aircraft based in the Falklands. Steve Gorton considered this a strategic failure commenting that:

The decisive Argentine strategic error was the failure to exploit the Port Stanley airfield. Properly used, that base could have been the key to victory, as was Henderson Field in the Guadalcanal campaign of 1942.<sup>48</sup>

The chief of the Argentine Air Force, General Lamidozo, believed that it was "physically impossible"<sup>49</sup> to develop the airfield. Admiral Woodward commented:

If the islands were to remain secure, adequate air cover was essential. Work should have begun on extending the runway at Port Stanley, so that the high performance aircraft could be operated from there.<sup>50</sup>

Because the Argentines chose to not lengthen the runway, they were forced to base their aircraft from the mainland. With the Falklands just at the limit of their aircraft's operational range, the pilots reached the islands with barely enough fuel to either conduct an attack against shipping or to conduct a dogfight for air superiority; they could not do both and safely return home. Therefore, the Argentines, although having superior numbers of aircraft, had a limited capability to gain and hold air superiority.

As for the British, they were simply faced with the problem of limited assets. Restricted to the few available Harriers operating from the carriers, the British commander closely husbanded his aircraft. They were essential in first defending the fleet and, once the land campaign began, in supporting the ground forces. With these limited air resources, Admiral Woodward relied heavily on his surface ships to control air space at the decisive points, for example, the beachhead at San Carlos. These ships could neither establish nor maintain air superiority, but they could contest control of the air in limited airspace. The British used their aircraft primarily in a negative role to prevent the Argentines from establishing air superiority as opposed to a positive role in establishing air superiority. The initiative gained by being on the offensive lay with the Argentines.

Exactly how did the Argentines plan on using their air force? This question weighed heavily in the mind of Admiral Woodward who wrote:

Their air forces posed a formidable threat, particularly numerically and with the ability to launch Exocet from the Super Etandard. If the whole could be brought together, I knew I had a problem. So in preparing my people to face the threat a balance had to be struck--getting the threat in perspective without

demoralizing my own side. Physically it would probably be a bit tight, unless we could engage the opposition piecemeal.<sup>51</sup>

The Argentines decided upon a strategy of attacking the ships and beachhead. In "Air Power, the Falklands, and the Principles of War," Tim Garden wrote:

The Argentines concentrated their mainland-based aircraft on attacks against the ships and the beachhead. This was a realistic strategy: the sinking of one or more of the major ships might have been sufficient to cause a British withdrawal, either through military necessity or political considerations.<sup>52</sup>

Some have argued that the Argentines could have picked better targets, for example the carriers or logistics ships. At the root of this argument is the perceived failure of the Argentines to identify the British operational center of gravity.

Up to the landing of troops at San Carlos, the British operational center of gravity was the troop transports for they carried the land forces necessary to seize and hold the island. Once the troops were landed, the operational center of gravity shifted to the troops ashore who would no longer be as vulnerable to air attack. The illustrative point is that the Argentines had the opportunity to attack the British center of gravity at its most vulnerable moment when it was in the densely concentrated form of troop transports. They failed to seize their moment, and instead focused on the escort ships. Nonetheless, the disruptive impact of their strategy on the British decision cycle illustrated the effect of the air force at the operational level despite their failure to chose the most important targets.

The operational effect of the Argentine air strategy has been previously alluded to. The sinking of three ships after the landing at

San Carlos forced a revision in the British land commander's plan. If the Argentines had had more success with the fusing of their bombs, the British ship losses would have been more severe and may have possibly arrested the land campaign.

The heavy ship losses of British and the heavy aircraft losses of the Argentines illustrated the attrition nature of the air war at the tactical level. As a result of their heavy air losses, the Argentines eventually were unable to sustain their attacks. The British faced a similar situation with their ship losses, but the Argentines yielded first. At the tactical level, the British ships and the Argentine aircraft were bitterly engaged in a struggle for survival with each side determined and courageous to continue the fight. Neither side had their will to fight broken. The steady buildup of losses was felt at the operational level, affecting the theater and the outcome of the event.

Another maneuver group having a substantial impact at the operational level was the submarine. With the sinking of the Belgrano, the British nuclear submarine achieved a success that by far exceeded its tactical implication. Steve Gorton wrote that "This dramatic proof [the sinking of Belgrano] of the SSN's power rendered the Argentine fleet impotent, confining its ships to mainland bases."<sup>53</sup> The submarine strongly contributed to the erosion of Argentine morale and the disruption of the Argentine decision cycle.

The sinking of the Belgrano demoralized the Argentines. In "The Empire Strikes Back," David Segal and Katharine Gravino commented:

Fearful of British submarine activity and demoralized by the loss of the Belgrano, the Argentine Navy was unwilling to risk further loss in a contest with a larger force. . . . However, the withdrawal of the Argentine Navy early in the conflict weakened

supply lines between the mainland and island garrisons. The sense of isolation that this produced may have demoralized the Argentine ground forces in the Malvinas.<sup>54</sup>

The demoralizing effect of the sinking of the Belgrano combined with the submarine's hidden but deadly threat, a threat which the Argentines were powerless to overcome, disrupted the Argentine decision cycle.

The Argentine leaders had some inkling of what to expect when British submarines arrived on station. Admiral Anaya, Argentina's chief of naval operations, in deciding to weigh in favor of launching the invasion of the Falklands, concluded that "whatever opportunity might exist for a successful invasion of Port Stanley would disappear when the submarines arrived."<sup>55</sup> Although the Argentine leaders appreciated the submarine threat, the sinking of the Belgrano had a greater influence than they anticipated. Fearful of risking their fleet, the naval leaders effectively removed their forces from any participation in supporting the defense of the islands. Harry Train wrote,

An equally small force of British nuclear attack submarines dominated Argentine naval leaders' decisions and held the Argentine surface navy at bay. It also controlled some of the earlier Argentine political decisions made at the onset of hostilities.<sup>56</sup>

This observation summarized the disruptive influence the submarine had on the Argentine decision cycle.

This disruptive effect closely paralleled that of the unlocated fleet that haunted Villeneuve. Nelson's unlocated fleet figured heavily in Villeneuve's calculations for he was constantly worried about the lurking threat to his fleet. The British submarine force had a similar effect on the Argentines. Unable to locate and attack the submarines, the Argentine admirals feared that the British were out their lurking

about poised to strike. This haunting fear disrupted their decision cycle, and effectively removed the Argentine fleet from the war.

The final maneuver warfare concept considered in this discussion is that of morale, specifically the destruction of the Argentine land force's will to resist. Tim Garden commented that "ultimately, the defeat of so many troops by so few was a measure of the breakdown of the morale of the Argentine forces."<sup>57</sup> As mentioned earlier, the Argentine land forces' morale was particularly susceptible.

At the outset, the Argentine land forces lacked confidence and cohesion. General Menendez "was further constrained," wrote Harold Fields, "by a lack of confidence and discipline between his officers and enlisted people, who had essentially been thrown together for the invasion and lacked the cohesion and professional noncommissioned officer corps present in British units."<sup>58</sup> Combined with outdated tactical doctrine, the Argentine land forces were not set up for success.<sup>59</sup>

The British recognized these vulnerabilities. From the Special Air Service (SAS) and Special Boat Service (SBS) came the reports that the:

Argentine soldiers' morale appeared to be low . . . they lacked shelter and food . . . they seemed to be poorly organized and spent little time improving their defensive positions. . . . In the words of one SAS soldier . . . they reminded him of a nineteenth-century peasant army.<sup>60</sup>

The British would exploit this vulnerability.

Another Argentine vulnerability was their command and control system. Because intense interservice rivalry contributed to the development of an inefficient command and control system, General

Menendez was unable to obtain rapid responses to his requests.<sup>61</sup> This inherent friction in the command and control process lengthened his decision cycle.

Recognizing these Argentine weaknesses in morale and communications, the British capitalized on them to the fullest. In "Problems of Land Strategy in Falkland War," E. Dar wrote:

The bombing plan, commando raids (Pebble Islands for instance) BBC Spanish broadcasts and the media were skillfully exploited for deception and psychological warfare. They played a part in demoralization and collapse of the Argentine garrison.<sup>62</sup>

The British also conducted a psychological campaign aimed at General Menendez. "It is clear," wrote General H. Rose of the SAS, "that our psychological warfare campaign was able to achieve results only when the Argentine forces perceived that the British had gained a position of overwhelming military superiority."<sup>63</sup> The success of the British actions at Goose Green demonstrated British superiority and "established a psychological ascendancy over the Argentines which our forces never lost."<sup>64</sup> Through their planned efforts and resulting actions, the British successfully attacked an Argentine critical vulnerability effectively destroying their morale and will to resist.

Addressing an aspect of the campaign that has continued relevance to amphibious warfare was the British use of deception. Through a show of force, the British deceived General Menendez into thinking that an amphibious landing at Port Stanley was about to occur. In his reflections on the war, the British Minister for Defense, John Nott wrote, "The carrier group made a major demonstration of force, simulating an amphibious landing off Port Stanley which successfully

drew the Argentines and revealed some of their defensive positions."<sup>65</sup>

This deception plan figured prominently in the successful landing at San Carlos for the Argentines were caught by surprise having expected an attack from the West.<sup>66</sup>

In summary, although the guiding hand of a common strategic sense does not link the individual maneuver warfare concepts into a grand design, broadly considered, the British did operate within the fundamental concept of maneuver warfare. They achieved a high operational tempo by necessity. They skillfully employed their land and naval forces--especially the submarine--at the operational level to disrupt the Argentine decision cycle. The Argentine cohesion and will to resist was severely eroded, and in the case of the land forces, destroyed. As for the Argentines, they successfully used their air force as an operational maneuver group which did successfully interrupt the British decision cycle.

## CHAPTER 5

### CONCLUSION

In the last decade, the world has undergone a radical transformation from a bipolar order dominated by two superpowers to a multipolar one decreasingly dominated by a single superpower. This transformation has significantly altered the strategic landscape and has caused the U.S. Armed Forces to re-evaluate their fundamental strategies and doctrines. A product of the U.S. Navy's re-evaluation has been the adoption of maneuver warfare as doctrine. This paper intended to answer the question: Does the doctrine of maneuver warfare improve the ability of the Navy to carry out its roles and functions in support of the national military strategy? To answer this question, three secondary questions were posed: Does maneuver warfare have a sound and rational basis to be considered part of the art of war? Does maneuver warfare have a basis in naval history? Does maneuver warfare have applicability in the future?

Chapter 2 concluded that maneuver warfare has a sound and rational basis. A common thread--the fundamental concept--appeared in the literature review. The fundamental concept was that maneuver warfare aimed for the psychological defeat of the enemy by destroying his cohesion and will to resist. This aim is achieved in disrupting his decision cycle by presenting cascading unexpected and threatening

situations by assailing his center of gravity at a tempo at which he can not respond.

The Trafalgar campaign strongly suggests that the British operated within the framework of maneuver warfare's fundamental concept. Villeneuve was faced with cascading and unexpected events which disrupted his decision cycle, destroyed his fleet's cohesion and their will to resist. Through their "rich experience" steeped in a traditional strategic sense combined with their freedom to act within the intent of their orders, the British sustained a high operational tempo. Consequently, they were able to rapidly maneuver their fleets which threatened the French center of gravity, the Toulon fleet, thwarting French intentions.

Unlike the Trafalgar campaign, the Falklands War does not as clearly fall within maneuver warfare's fundamental concept. The evidence does strongly support the conclusion that the Argentines suffered a severe psychological defeat. What is not as clear is whether or not this had been achieved by the disruption of the Argentine decision cycle. What is consistent with the concept, however, is that the British operated at a high tempo exemplified by superb professionalism. Unlike the Trafalgar campaign, this tempo was driven by necessity and not a common strategic sense. They quickly and skillfully employed their land and naval forces, however unsuited they may have been for such a power projection role for which they had not been designed. The operational level impact of the submarine was significant, for the Argentine Navy was effectively rendered useless after the sinking of the Belgrano. Argentine cohesion and will to

resist was severely eroded, and in the case of the land forces, destroyed.

These two case studies suggest that navies have operated within the maneuver warfare concept, with some variance, at the operational level of war. The crucial trend has been a high operational tempo aimed at an enemy whose will is particularly vulnerable. In the Trafalgar campaign, the British maintained a high operational tempo sustained by their common strategic sense. In the Falkland's War, the British maintained a high operational tempo because of the necessity to complete the war before the onset of winter. In each case, the enemy's will to resist appeared weakened at the onset, easily susceptible to attack.

How does the decision cycle fit in all of this?

As discussed in Chapter 2, the decision cycle concept originated from Colonel Boyd's analysis of dogfights in the Korean War. His tactical level analysis became a model used to describe the operational level decision-making process. A possible weakness exists here, for does the model derived from tactical evidence apply to situations at the operational level? In other words, does the Boyd cycle present a true representation of decision-making at the operational level? The analysis of the two case studies offers a possible answer.

First, Boyd's analysis of the dogfight focused on the competing decision cycles of two individuals, the pilots of the two aircraft. If the one pilot succeeded in operating quicker than the decision cycle of his opponent, the cascading disruptive effects would effectively paralyze the opponent achieving his psychological defeat. Note that a

critical aspect of the dogfight is its one-on-one nature. The pilot is isolated and faces the burden of his decision alone. This model accurately represents the case of Villeneuve.

Villeneuve was the targeted enemy mind in the Trafalgar campaign. He was solely responsible for the conduct and command of his fleet. Although he may have had the moral support of his subordinates, he faced the burden of command alone, and this is strongly supported by his letters to Decres. Because of the nature of naval warfare and communications of his era, he could not share his burden with subordinates or peers. As such, he truly was isolated. The one-on-one Boyd model appears to hold.

The Falklands War does not suggest this to be the case in the modern era. Although the British were victorious and had destroyed the will to resist of the Argentine land component commander, their success in disrupting the decision-making cycle of the operational commanders above the land component commander is not as clear. The element that clouds the issue is the growing complexity of decision-making. The commander at the operational level was commanding from the Argentine mainland, and he closely communicated with the ruling Junta. This suggests that the process of decision making was not solely limited to a single individual. The burden and responsibility was shared and the process was more complex. This suggests a departure from the simple one-on-one Boyd model. In other words, the decision cycle is more complex than a model that implies that the cycle can be interrupted at a single point. Herein lies the root problem of the Boyd decision cycle model, for it too simply describes the complexity of the decision-making

process of warfare at the operational level. The process involves a multitude of individuals and a complex collective process.

In retrospect, the fundamental concept described requires revision. A better definition of the concept may be simply to achieve the psychological defeat of the enemy by destroying his cohesion and will to resist by assailing his center of gravity at a tempo at which he can not respond. The method of assailing the center of gravity may be direct or indirect depending upon which level of war your are viewing. This revised definition implies several important conditions. First, that the enemy's will and cohesion are vulnerable. Second, that his center of gravity is assailable by the means at hand.

And what of future applicability? The Falklands War suggests several parallel's for the future. First, the Falklands War provides an excellent model for future contingency operations envisioned by "...From the Sea" and "Forward...From the Sea." Like the British, the U.S. Navy may, by necessity, be forced to act in a situation where the forces on station are not necessarily the best suited for the operation. Nonetheless, possible courses of action suggested by maneuver warfare remain viable options for the operational commander. The commander must consider whether or not if the enemy's will is susceptible to exploitation by the means available. Is the center of gravity assailable? If so, will the commander be able to sustain a high enough operational tempo to overwhelm the enemy? By examining these questions, the utility of maneuver warfare is demonstrated.

Further questions remain, however. By suggesting that the fundamental concept of maneuver warfare should be revised suggests that

the historical basis of maneuver warfare requires a deeper and more rigorous examination. Has the advance of technology blurred the fundamental differences between land and naval warfare? Has the traditional dividing line between the land and sea really disappeared? Finally, given our ability today and in the future, how will the U.S. Navy sustain a high operational tempo capable of overwhelming our future enemies?

In closing, this study supports the U.S. Navy's adoption of maneuver warfare as doctrine. Maneuver warfare is not a radical concept to the naval mind, for seeking the psychological defeat of the enemy is not a new concept. Although further study is required to confirm this conclusion, in final distillation, the essence of maneuver warfare may simply be a sustained high operational tempo that rapidly overwhelms the enemy. Although advances in technology may change the means in which this is achieved, the essential guiding hand remains the superior professional spirit so gloriously exemplified by Nelson's "Band of Brothers." The challenge for the leadership of the U.S. Navy is to sustain and improve that spirit.

ENDNOTES

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<sup>30</sup>Ibid., 96.

<sup>31</sup>John Dalton, Jeremy Boorda, and Carl Mundy, "Forward...From the Sea," United States Naval Institute Proceedings 120 (December 1994): 46.

<sup>32</sup>Ibid., 49.

<sup>33</sup>Ibid.

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<sup>3</sup>Ibid.

<sup>4</sup>Gary Hart and William Lind, America Can Win (Bethesda, Maryland: Adler and Adler, 1986), xi.

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<sup>7</sup>Hart, America Can Win, 30.

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<sup>11</sup>Andrew Walker, "An Alternative to Maneuver Warfare," Marine Corps Gazette 75 (November 1991): 48.

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<sup>74</sup> Corbett, 391.

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